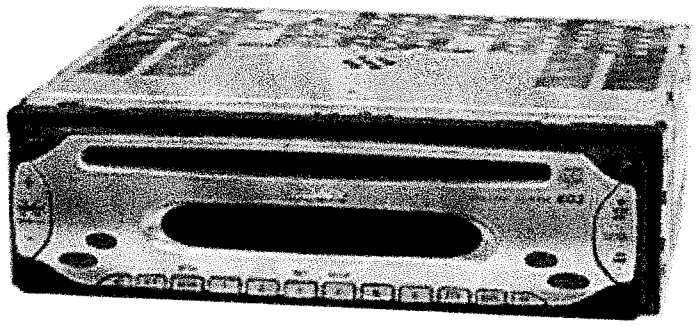
SONY-10168

CDX-L480X

SERVICE MANUAL

AEP Model
UK Model

Ver 1.0 2002. 12



• The tuner and CD sections have no adjustments.

Model Name Using Similar Mechanism	CDX-L380X
CD Drive Mechanism Type	MG-393XA-121//Q
Optical Pick-up Name	KSS-720A

SPECIFICATIONS

CD player section

Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	67 dB (stereo), 69 dB (mono)
Harmonic distortion at 1 kHz	0.5% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 279 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 40 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	45 W × 4 (at 4 ohms)

General

Outputs	Audio outputs (rear) Power aerial relay control terminal
Inputs	Telephone ATT control terminal
Tone controls	Low: ±10 dB at 60 Hz (XPLOD) Mid: ±10 dB at 1 kHz (XPLOD) High: ±10 dB at 10 kHz (XPLOD)
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 178 × 50 × 176 mm (w/h/d)
Mounting dimension	Approx. 182 × 53 × 161 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW COMPACT DISC PLAYER

9-874-257-01
2002L0400-1
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Sony Corporation
e Vehicle Company
Published by Sony Engineering Corporation

SONY®

SERVICE NOTES

CLASS 1
LASER PRODUCT

This label is located on the bottom of the chassis.

CAUTION—INVISIBLE LASER RADIATION WHEN OPEN
DO NOT STARE INTO BEAM OR
VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

This label is located on the drive unit's internal chassis.

When replacing the chassis (T.U) of mechanism deck which have the "CAUTION LABEL" attached, please be sure to put a new LABEL (OP CAUTION) (3-223-913-01) to the chassis (T.U).

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

TEST DISCS

This set can playback CD-R and CD-ROM discs. The following test discs should be used to check the capability:

CD-R test disc TCD-R082LMT (Part No. J-2502-063-1)
CD-RW test disc TCD-W082L (Part No. J-2502-063-2)

Notes on CD-R/CD-RW discs

- You can play CD-Rs (recordable CDs)/CD-RWs (rewritable CDs) designed for audio use on this unit.
  Look for these marks to distinguish CD-Rs/CD-RWs for audio use.

These marks denote that a disc is not for audio use.

- Some CD-Rs/CD-RWs (depending on the equipment used for its recording or the condition of the disc) may not play on this unit.
- You cannot play a CD-R/a CD-RW that is not finalized*.

* A process necessary for a recorded CD-R/CD-RW disc to be played on the audio CD player.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

● UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

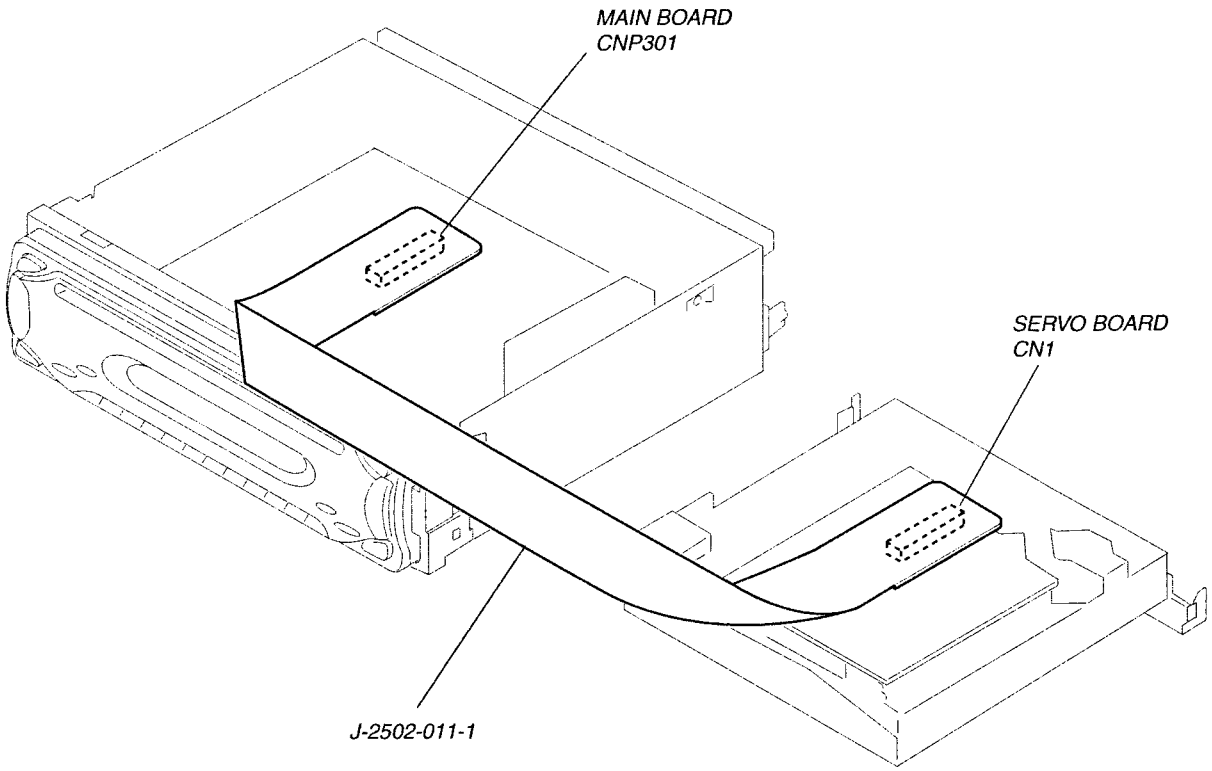
Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

EXTENSION CABLE AND SERVICE POSITION

When repairing or servicing this set, connect the jig (extension cable) as shown below.

- Connect the MAIN board (CNP301) and the SERVO board (CN1) with the extension cable (Part No. J-2502-011-1).



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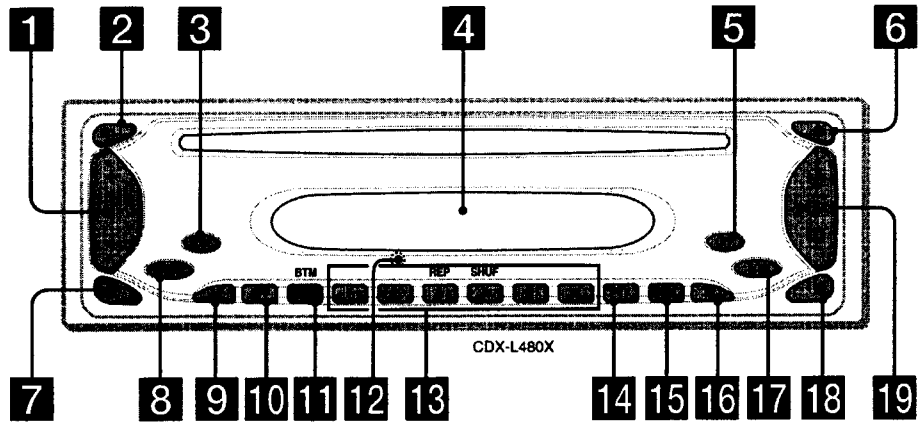
SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls

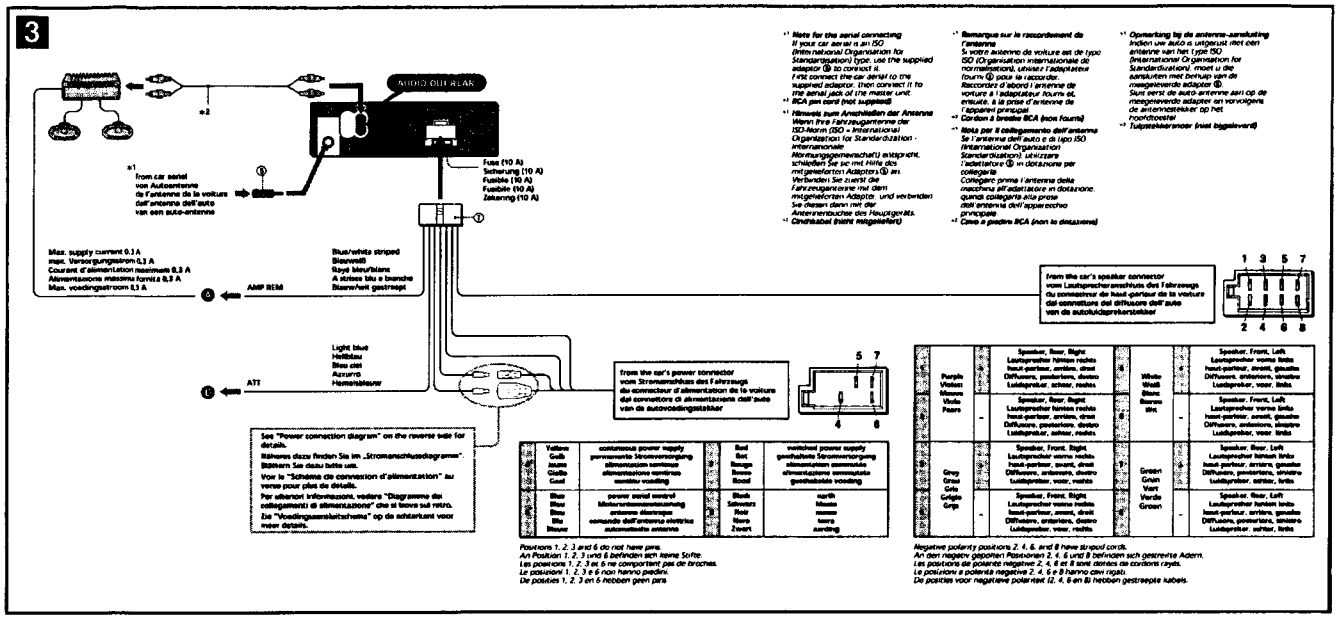
Refer to the pages listed for details.



1 **Volume +/– button**
2 **SEL (select) button**
Selecting items.
3 **MODE button**
Changing the operation.
4 **Display window**
5 **OFF (Stop/Power off) button*** 7, 9
6 **⏏ (eject) button** 9
7 **(front panel release) button** 7
8 **SOURCE (Power on/Radio/CD) button**
Selecting the source.
9 **AF button** 12, 13, 14
10 **ATT (attenuate) button** 16
11 **SENS/BTM button** 10, 11, 14
12 **RESET button** (located on the front side of the unit, behind the front panel) 7
13 **Number buttons**
Radio:
Storing the desired station on each number button.
CD:
③: **REP** 10
④: **SHUF** 10
14 **PTY (programme type) button** 15
15 **DSPL (display mode change) button** 9, 12
16 **TA button** 13, 14
17 **EQ3 button** 17
18 **Receptor for the card remote commander**
19 **SEEK +/– button**
Radio:
Tuning in stations automatically/finding a station manually.
CD:
Skipping tracks/fast-forwarding, reversing a track.

* **Warning when installing in a car without an ACC (accessory) position on the ignition switch**
After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.

Connections



*1 Note for the aerial connecting
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adaptor Ⓑ to connect it. If not, connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.
*2 RCA pin cord (not supplied)
*1 Hinweis zum Anschließen der Antenne
Wenn Ihre Fahrzeugantenne der ISO-Norm (ISO = International Organization for Standardization - Internationale Normungsorganisation) entspricht, schließen Sie sie mit Hilfe des mitgelieferten Adapters Ⓑ an. Verbinden Sie zuerst die Fahrzeugantenne mit dem mitgelieferten Adapter und verbinden Sie diesen dann mit der Antennenbuchse des Hauptgeräts.
*2 Cinchkabel (nicht mitgeliefert)
*1 Remarque sur le raccordement de l'antenne
Si votre antenne de voiture est de type ISO (Organisation internationale de normalisation), utilisez l'adaptateur fourni Ⓑ pour le raccorder. Raccordez d'abord l'antenne de voiture à l'adaptateur fourni et, ensuite, à la prise d'antenne de l'appareil principal.
*2 Cordon à broche RCA (non fourni)
*1 Nota per il collegamento dell'antenna
Se l'antenna dell'auto è di tipo ISO (International Organization for Standardization), utilizzare l'adattatore Ⓑ in dotazione per collegarla. Collegare prima l'antenna della macchina all'adattatore in dotazione, quindi collegarla alla presa dell'ingresso dell'apparecchio principale.
*2 Cavo a piedini RCA (non in dotazione)
*1 Opmerking bij de antenne-aansluiting
Indien uw auto-antenne van het type ISO (Internationale Organisatie voor Standaardisatie) is, moet u die aansluiten met behulp van de meegeleverde adapter Ⓑ. Sluit eerst de auto-antenne aan op de meegeleverde adapter en vervolgens de antennestekker op het hoofdtoestel.
*2 Tulpstekersnoer (niet bijgeleverd)

	Yellow / Gelb / Giallo / Geel	continuous power supply / permanente Stromversorgung / alimentation continue / alimentazione continua / constante voeding		Red / Rot / Rouge / Rosso / Rood	switched power supply / geschaltete Stromversorgung / alimentation commutée / alimentazione commutata / geschakelde voeding				
	Blue / Blau / Bleu / Blu / Blauw	power send control / Motorantennensteuerung / commande électrique / comando dell'antenna elettrica / automatische antenne		Black / Schwarz / Noir / Nero / Zwart	earth / Masse / masse / massa / aarding				
	Purple / Violett / Violet / Viola / Paars	Speaker, Rear, Right / Lautsprecher hinten rechts / haut-parleur, arrière, droit / Diffuseur, posteriore, destro / Luidspreker, achter, rechts		White / Weiß / Blanc / Bianco / Wit	Speaker, Front, Left / Lautsprecher vorne links / haut-parleur, avant, gauche / Diffuseur, anteriore, sinistro / Luidspreker, voor, links				
	Violet / Violett / Violet / Viola / Paars	Speaker, Front, Right / Lautsprecher vorne rechts / haut-parleur, avant, droit / Diffuseur, anteriore, destro / Luidspreker, voor, rechts		White/Black / Weiß/Schwarz / Blanc/Noir / Bianco/Nero / Wit/Zwart	Speaker, Front, Left / Lautsprecher vorne links / haut-parleur, avant, gauche / Diffuseur, anteriore, sinistro / Luidspreker, voor, links				
	Gray / Grau / Gris / Grigio / Grijs	Speaker, Front, Right / Lautsprecher vorne rechts / haut-parleur, avant, droit / Diffuseur, anteriore, destro / Luidspreker, voor, rechts		Green / Grün / Vert / Verde / Groen	Speaker, Rear, Left / Lautsprecher hinten links / haut-parleur, arrière, gauche / Diffuseur, posteriore, sinistro / Luidspreker, achter, links				
	White / Weiß / Blanc / Bianco / Wit	Speaker, Rear, Left / Lautsprecher hinten links / haut-parleur, arrière, gauche / Diffuseur, posteriore, sinistro / Luidspreker, achter, links		Green/Black / Grün/Schwarz / Vert/Noir / Verde/Nero / Groen/Zwart	Speaker, Rear, Left / Lautsprecher hinten links / haut-parleur, arrière, gauche / Diffuseur, posteriore, sinistro / Luidspreker, achter, links				

Positions 1, 2, 3 and 6 do not have pins.
An Position 1, 2, 3 und 6 befinden sich keine Stifte.
Les positions 1, 2, 3 et 6 ne comportent pas de broches.
Le posizioni 1, 2, 3 e 6 non hanno piedini.
De posities 1, 2, 3 en 6 hebben geen pins

Negative polarity positions 2, 4, 6, and 8 have striped cords.
An den negativ gepolten Positionen 2, 4, 6 und 8 befinden sich gestreifte Adern.
Les polarités de polarité négative 2, 4, 6 et 8 sont dotées de cordons rayés.
Le posizioni a polarità negativa 2, 4, 6 e 8 hanno cavi rigati.
De posities voor negatieve polariteit 2, 4, 6 en 8 hebben gestreepte kabels.

Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Do not get the wires under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the power connecting cord Ⓓ to the unit and speakers before connecting it to the auxiliary power connector.
- Run all earth wires to a common earth point.
- Be sure to insulate any loose unconnected wires with electrical tape for safety.

Notes on the power supply cord (yellow)

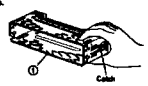
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When too car circuits are rated high enough, connect the unit directly to the battery.

Parts list (EN)

- The numbers in the list are keyed to those in the instructions.
- The bracket Ⓒ and the protection collar Ⓖ are attached to the unit before shipping. Before mounting the unit, use the release keys Ⓔ to remove the bracket Ⓒ and the protection collar Ⓖ from the unit. For details, see "Removing the protection collar and the bracket (EN)" on the reverse side of the sheet.
- Keep the release keys Ⓔ for future use as they are also necessary if you remove the unit from your car.

Caution

Handle the bracket Ⓒ carefully to avoid injuring your fingers.



Note

Before installing, make sure that the catches on both sides of the bracket Ⓒ are bent inwards 2 mm. If the catches are straight or bent outwards, the unit will not be installed securely and may spring out.

Connection example (EN)

Notes

- *Be sure to connect the earth cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Connection diagram (EN)

● To AMP REMOTE IN of an optional power amplifier
This connection is only for amplifiers. Connecting any other system may damage the unit.

● To the interface cable of a car telephone

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord Ⓓ may damage the aerial.

Notes on the control leads

- *The power aerial control lead (blue) applies + 12 V DC when you turn on the tuner or when activate the AF (Alternative Frequency), TA (Traffic Announcement) function.*
- *When your car has built-in FM/MW/LW aerial in the rear side glass, connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. Consult your dealer.*
- *A power aerial without a relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the earth lead of this unit to the (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use an built-in speaker when installed in your car. If the unit uses a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker cords to each other.*

Note on connection

If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Vorsicht

- Dieses Gerät ist ausschließlich für den Betrieb bei 12 V Gleichstrom (negative Erdung) bestimmt.
- Achten Sie darauf, dass die Kabel nicht unter einer Schraube oder zwischen beweglichen Teilen wie z. B. in einer Sitzschiene eingeklemmt werden.
- Schalten Sie, bevor Sie irgendwelche Anschlüsse vornehmen, die Zündung des Fahrzeugs aus, um Kurzschlüsse zu vermeiden.
- Verbinden Sie das Stromversorgungskabel Ⓓ mit dem Gerät und den Lautsprechern, bevor Sie es mit dem Hilfsstromanschluss verbinden.
- **Schließen Sie alle Erdungskabel an einen gemeinsamen Massepunkt an.**
- Aus Sicherheitsgründen müssen alle lose, nicht angeschlossenen Drähte mit Isolierband abisoliert werden.

Hinweise zum Stromversorgungskabel (gelb)

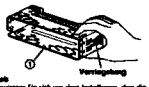
- Wenn Sie dieses Gerät zusammen mit anderen Stereokomponenten anschließen, muss der Autostromkreis, an den die Geräte angeschlossen sind, eine höhere Leistung aufweisen als die Summe der Sicherungen der einzelnen Komponenten.
- Wenn kein Autostromkreis eine so hohe Leistung aufweist, schließen Sie das Gerät direkt an die Batterie an.

Teileliste (EN)

- Die Nummern in der Liste sind denselben wie im Erläuterungstext.
- Die Halterung Ⓒ und die Schutzmanschette Ⓖ werden vor dem Anliefern am Gerät angebracht. Bevor Sie das Gerät montieren, nehmen Sie die Halterung Ⓒ und die Schutzmanschette Ⓖ mithilfe des Löseschlüssel Ⓔ bitte vom Gerät ab. Einzelheiten dazu finden Sie unter "Abnehmen der Schutzmanschette und der Halterung (EN)" auf der Rückseite dieses Blattes.
- **Bewahren Sie die Löseschlüssel Ⓔ für den späteren Gebrauch auf. Sie werden z. B. benötigt, wenn Sie das Gerät aus dem Fahrzeug ausbauen wollen.**

Sicherheitshinweise

Seien Sie beim Umgang mit der Halterung Ⓒ vorsichtig, damit Sie sich nicht die Hände verletzen.



Hinweis

Vergewissern Sie sich vor dem Installieren, dass die Verriegelungen an beiden Seiten der Halterung Ⓒ um 2 mm nach innen gebogen sind. Wenn die Verriegelungen gerade oder nach außen gebogen sind, lässt sich das Gerät nicht sicher installieren und kann herausspringen.

Anschlussbeispiel (EN)

Hinweise

- *Schließen Sie unbedingt zuerst den Massedraht an, bevor Sie den Verstärker anschließen.*
- *Wenn Sie einen gesondert erhältlichen Endverstärker anschließen und den integrierten Verstärker nicht benutzen, wird der Signalton deaktiviert.*

Anschlussdiagramm (EN)

● An AMP REMOTE IN des gesondert erhältlichen Endverstärkers
Dieser Anschluss ist ausschließlich für Verstärker geeignet. Schließen Sie nichts anderes daran an. Andernfalls kann das Gerät beschädigt werden.

● An Schnittstellenkabel eines Autotelefons

Warnung

Wenn Sie eine Fahrzeugantenne ohne Relaisbüchse verwenden, kann durch Anschließen dieses Geräts mit dem mitgelieferten Stromversorgungskabel Ⓓ der Antennenmotor beschädigt werden.

Hinweise zu den Steuerleitungen

- *Die Motorantennen-Steuerleitung (blau) liefert + 12 V Gleichstrom, wenn Sie den Tuner einschalten oder die AF- (Alternativfrequenzsuche) oder die TA-Funktion (Verkehrsdurchsage) aktivieren.*
- *Wenn das Fahrzeug mit einer in der Heck-Seitenfensterscheibe integrierten FM/MW/LW-Antenne ausgestattet ist, schließen Sie die Motorantennen-Steuerleitung (blau) oder die Zubehörstromversorgungsleitung (rot) an den Stromversorgungsanschluss des vorhandenen Antennenverstärkers an. Wenden Sie sich diesbezüglich an Ihren Händler.*
- *Es kann nur eine Motorantenne mit Relaisbüchse angeschlossen werden.*

Stromversorgung des Speichers

Wenn die gelbe Stromversorgungsleitung angeschlossen ist, wird der Speicher stets (auch bei ausgeschalteter Zündung) mit Strom versorgt.

Hinweise zum Lautsprecheranschluss

- *Schalten Sie das Gerät aus, bevor Sie die Lautsprecher anschließen.*
- *Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 Ohm und ausreichender Belastbarkeit. Anderenfalls können die Lautsprecher beschädigt werden.*
- *Verbinden Sie die Lautsprecheranschlüsse nicht mit dem Wagenchassis, und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautsprechers.*
- *Verbinden Sie die Massekabelung dieses Geräts nicht mit dem negativen (–) Lautsprecheranschluss.*
- *Versuchen Sie nicht, Lautsprecher parallel anzuschließen.*
- *An die Lautsprecheranschlüsse dieses Geräts dürfen nur Passivlautsprecher angeschlossen werden. Schließen Sie keine Aktivlautsprecher (Lautsprecher mit eingebautem Verstärker) an, da das Gerät sonst beschädigt werden könnte.*
- *Um Fehlfunktionen zu vermeiden, verwenden Sie nicht die im Fahrzeug installierten, integrierten Lautsprecherleitungen, wenn am Ende eine gemeinsame negative (–) Leitung für den rechten und den linken Lautsprecher verwendet wird.*
- *Verbinden Sie nicht die Lautsprecherkabel des Geräts miteinander.*

Hinweis zum Anschließen

Wenn Lautsprecher und Verstärker nicht richtig angeschlossen sind, erscheint "FAILURE" im Display. Vergewissern Sie sich in diesem Fall, dass Lautsprecher und Verstärker richtig angeschlossen sind.

Précautions

- Cet appareil est conçu pour fonctionner sur un courant continu de 12 V avec masse négative.
- Veiller de bien den vis sur les câbles ou de coincer ceux-ci dans des pièces mobiles (par exemple, armature de siège).
- Avant d'effectuer des raccordements, éteignez le moteur pour éviter les courts-circuits.
- Branchez le cordon d'alimentation Ⓓ sur l'appareil et les haut-parleurs avant de le brancher sur le connecteur d'alimentation auxiliaire.
- Rassemblez tous les fils de terre en un point de masse commun.
- Veillez à isoler tout fil ou câble non connecté avec du chatterton adéquat.

Remarques sur le cordon d'alimentation (jaune)

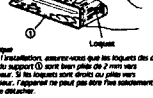
- Lorsque cet appareil est raccordé à d'autres éléments stéréo, la valeur nominale des circuits du véhicule raccordés doit être supérieure à la somme des fusibles de chaque élément.
- Si aucun circuit de la voiture n'est assez puissant, raccordez directement l'appareil à la batterie.

Liste des composants (EN)

•Les numéros de la liste correspondent à ceux des instructions.
•Le support Ⓒ et le tour de protection Ⓖ sont fixés à l'appareil avant de quitter l'usine. Avant le montage de l'appareil, utilisez les clés de déblocage Ⓔ pour détacher le support Ⓒ et le tour de protection Ⓖ de l'appareil. Pour de plus amples informations, reportez-vous à la section "Retrait du tour de protection et du support (EN)" au verso de la feuille.
•Conservez les clés de déblocage Ⓔ pour une utilisation ultérieure au cas où vous en auriez également besoin pour retirer l'appareil de votre véhicule.

Avertissements

Manipulez précautionneusement le support Ⓒ pour éviter de vous blesser aux doigts.



Remarques

Avant l'installation, assurez-vous que les loquets des deux côtés du support Ⓒ sont bien plés de 2 mm vers l'intérieur. Si les loquets sont droits ou pliés vers l'extérieur, l'appareil ne peut pas être fixé solidement et peut se détacher.

Exemple de raccordement (EN)

Remarques

- *Raccordez d'abord le fil de masse avant de connecter l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance en option et si vous n'utilisez pas l'amplificateur intégré, le bip sera désactivé.*

Schémas de connexion (EN)

● Au niveau du AMP REMOTE IN d'un amplificateur de puissance facultatif
Ce raccordement existe seulement pour les amplificateurs. Le raccordement à tout autre système peut endommager l'appareil.

● Vers le cordon de liaison d'un téléphone de voiture

Avertissement

Si vous disposez d'une antenne électrique sans boîtier de relais, le branchement de cet appareil au moyen du cordon d'alimentation fourni Ⓓ risque d'endommager l'antenne.

Remarques sur les fils de commande

- *Le fil de commande (bleu) fournit du courant continu de +12 V lorsque vous allumez le tuner ou de cause ou lorsque vous activez la fonction TA (informations routières) ou AF (fréquences alternatives).*
- *Lorsque votre voiture est équipée d'une antenne FM/GO/PO intégrée dans la vitre arrière/latérale, raccorder le fil de commande de l'antenne (bleu) ou l'entrée d'alimentation des accessoires (rouge) au borne de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Connexion pour la conservation de la mémoire

Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si le clé de contact est en position d'arrêt.

Remarques sur le connexion des haut-parleurs

- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas raccorder le câble de masse de cet appareil à la borne négative (–) du haut-parleur.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas connecter d'enceintes acoustiques actives (avec amplificateurs intégrés) aux bornes d'enceinte de cet appareil, pour éviter d'endommager l'appareil. Veiller à raccorder des enceintes passives uniquement.*
- *Pour éviter tout dysfonctionnement, n'utilisez pas les fils des haut-parleurs intégrés installés dans votre voiture si l'appareil dispose d'un fil négatif commun (–) pour les haut-parleurs droit et gauche.*
- *Ne raccordez pas entre eux les cordons des haut-parleurs de l'appareil.*

Remarques sur le raccordement

Si les enceintes et l'amplificateur ne sont pas raccordés correctement, le message "FAILURE" s'affiche. Dans ce cas, assurez-vous que les enceintes et l'amplificateur sont raccordés correctement.

Attenzione

- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Evitare che i cavi rimangano bloccati da una vite o incastrati nelle parti mobili (ad esempio nelle guide scorrevoli dei sedili).
- Prima di effettuare i collegamenti, spegnere il motore dell'automobile onde evitare di causare cortocircuiti.
- Collegare il cavo di collegamento dell'alimentazione Ⓓ all'apparecchio e ai diffusori prima di collegarlo al connettore di alimentazione ausiliare.
- Portare tutti i cavi di massa a un punto di massa comune.
- Per sicurezza, assicurarsi di isolare qualsiasi cavo non collegato utilizzando del nastro adesivo.

Note sul cavo di alimentazione (giallo)

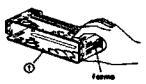
- Se questo apparecchio viene collegato in combinazione con altre componenti stereo, la potenza nominale del circuito dell'automobile deve essere superiore a quella prodotta dalla somma dei fusibili di ciascun componente.
- Se la potenza nominale dei circuiti dell'automobile non è sufficiente, collegare l'apparecchio direttamente alla batteria.

Elenco dei componenti (EN)

•I numeri nella lista corrispondono a quelli riportati nelle istruzioni.
•La staffa Ⓒ e la cornice di protezione Ⓖ vengono applicati all'unità in fabbrica. Prima di installare l'unità, staccare la staffa Ⓒ e la cornice di protezione Ⓖ dall'apparecchio. Per ulteriori informazioni, vedere "Rimozione della staffa e della cornice di protezione (EN)" sul lato opposto del foglio.
•Conservare in chiavi di rilascio Ⓔ per un uso futuro in quanto sono necessarie per rimuovere l'unità dall'auto.

Attenzione

Maneggiare la staffa Ⓒ con cautela per evitare di ferirsi le mani.



Nota

Prima di installare l'unità, assicurarsi di ripiegare i ferri presenti su entrambi i lati della staffa Ⓒ verso l'interno di 2 mm. Se i ferri sono dritti o ripiegati verso l'esterno, l'apparecchio non verrà installato in modo sicuro e potrebbe non essere saldo.

Esempi di collegamento (EN)

Note

- *Assicurarsi di collegare il cavo di terra prima di collegare l'apparecchio all'amplificatore.*
- *Se si effettua il collegamento di un amplificatore di potenza opzionale e l'amplificatore incorporato non viene utilizzato, il segnale acustico è disattivo.*

Schema di collegamento (EN)

● A AMP REMOTE IN di un amplificatore di potenza opzionale
Questo collegamento è riservato esclusivamente agli amplificatori. Non collegare un tipo di sistema diverso onde evitare di causare danni all'apparecchio.

● Al cavo interfaccia di un telefono per auto

Avvertenza

Quando si collega l'apparecchio con il cavo di alimentazione in dotazione Ⓓ, si potrebbe danneggiare l'antenna elettrica se questa non ha la scatola di relè.

Note sul cavi di comando

- *Il cavo (blu) di comando dell'antenna elettrica fornisce alimentazione pari a +12 V CC quando si attiva il sintonizzatore o la funzione TA (Traffico) o AF (Frequenze alternative).*
- *Se l'automobile è dotata di antenna FM/MW/LW incorporata vetro posteriore/laterale, collegare il cavo (blu) di controllo dell'antenna elettrica o il cavo (rosso) di ingresso dell'alimentazione opzionale al terminale di alimentazione dell'amplificatore dell'antenna esistente. Per ulteriori informazioni, consultare il proprio fornitore.*
- *Non è possibile usare un'antenna elettrica senza scatola a relè con questo apparecchio.*

Collegamento per la conservazione della memoria

Quando il cavo di ingresso alimentazione giallo è collegato, viene sempre fornita alimentazione al circuito di memoria anche quando l'interruttore di accensione è spento.

Note sul collegamento dei diffusori

- *Prima di collegare i diffusori spegnere l'apparecchio.*
- *Usare diffusori di impedenza compresa tra 4 e 8 ohm e con capacità di potenza adeguate, altrimenti i diffusori potrebbero venire danneggiati.*
- *Non collegare i terminali dei sistema diffusori al telaio dell'auto e non collegare i terminali dei diffusore destro a quelli del diffusore sinistro.*
- *Non collegare il cavo di terra di questo apparecchio al terminale negativo (–) dei diffusore.*
- *Non collegare i diffusori in parallelo.*
- *Assicurarsi di collegare soltanto diffusori passivi, poiché il collegamento di diffusori attivi, dotati di amplificatori incorporati, ai terminali dei diffusori potrebbe danneggiare l'apparecchio.*
- *Per evitare problemi di funzionamento, non utilizzare i cavi dei diffusori incorporati installati nell'automobile se l'apparecchio condivide un cavo comune negativo (–) per i diffusori destro e sinistro.*
- *Non collegare fra loro i cavi dei diffusori dell'apparecchio.*

Nota sul collegamento

Se l'amplificatore e il diffusore non sono collegati correttamente, "FAILURE" viene visualizzato nel display. In tal caso, assicurarsi che l'amplificatore e il diffusore siano collegati correttamente.

Let op!

- Dit apparaat is ontworpen voor gebruik op gelijkstroom van een 12 Volts auto-accu, negatief geaard.
- Zorg ervoor dat de draden niet onder een schroef of tussen bewegende onderdelen (b.v. zetrails) terechtkomen.
- Alvorens aansluitingen te verrichten moet u het contact afzetten om kortsluiting te voorkomen.
- Sluit het netsnoer Ⓓ aan op het toestel en de luidsprekers voordat u het op de hulpvoedingsaansluiting aansluit.
- **Sluit alle aarddraden op een gemeenschappelijk aardpunt aan.**
- Voorzie niet aangesloten draden om veiligheidsredenen altijd van isolatietape.

Opmerkingen bij de voedingskabel (geel)

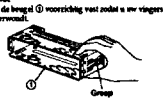
- Wanneer u dit toestel aansluit samen met andere componenten, moet het vermogen van de aangesloten autostroomkring groter zijn dan de som van de vermogens van elke afzonderlijke component.
- Wanneer het vermogen autostroomkring is, moet u het toestel rechtstreeks aansluiten op de batterij.

Onderdelenlijst (EN)

•De nummers in de afbeelding verwijzen naar die in de montage-aanwijzingen.
•De beugel Ⓒ en de beschermende rand Ⓖ worden bevestigd op het toestel voordat dit wordt verzonden. Voordat u het toestel plaatst, moet u de ontgrendelingssleutels Ⓔ gebruiken om de beugel Ⓒ en de beschermende rand Ⓖ los te verwijderen van het toestel. Zie "De beschermende rand en de beugel verwijderen (EN)" aan de achterzijde van dit vel voor meer informatie.
•**Bewaar de ontgrendelingssleutels Ⓔ voor toekomstig gebruik omdat u deze ook nodig hebt om het toestel uit de auto te verwijderen.**

Opgelet

Houd de beugel Ⓒ voorzichtig vast zodat u uw vingers niet verwondt.



Opmerking

Voordat u het toestel installeert, moet u de grepen aan beide zijden van de beugel Ⓒ 2 mm naar binnen buigen. Als de grepen recht zijn of naar buiten gebogen, kan het toestel niet goed worden bevestigd en kan de toestelen.

Voorbeeldaansluitingen (EN)

Opmerkingen

- *Sluit aard de massakabel aan alvorens de versterker aan te sluiten.*
- *Wanneer u een los verkrijgbare vermogensversterker aansluit en de ingebouwde versterker niet gebruikt, wordt de pieptoon uitgeschakeld.*

Aansluitschema (EN)

● Naar AMP REMOTE IN van een los verkrijgbare vermogensversterker
Deze aansluiting is alleen bedoeld voor versterkers. Door een ander systeem aan te sluiten kan het toestel worden beschadigd.

● Naar het interface-snoer van een autotelefoon

Opgelet

Indien u een elektrische antenne heeft zonder relaisdoos, kan het aansluiten van deze eenheid met het bijgeleverde netsnoer Ⓓ de antenne beschadigen.

Opmerking betreffende de aansluitsnoeren

- *De antenneaansturingsdraad (blauw) levert + 12 V gelijkstroom wanneer u de tuner inschakelt of als de AF (Alternative Frequency), TA (Traffic Announcement) functie is ingeschakeld.*
- *Wanneer uw auto is uitgerust met een FM/MW/LW-antenne in de achterruit/zijruit, moet u de antenneaansturingsdraad (blauw) of de hulpvoedingsdraad (rood) aansluiten op de voedingsingang van de bestaande antennevercharker. Raadpleeg uw dealer voor meer details.*
- *Met dit apparaat u kan niet negatief aan automatische antenne zender kunnen worden gebruikt.*

Installatiedraden van het geheugen

Zolang de gele stroomdraad is aangesloten, blijft de stroomvoorziening naar het geheugencircuit, ook wanneer het contact van de auto wordt uitgeschakeld.

Opmerkingen betreffende het aansluiten van de luidsprekers

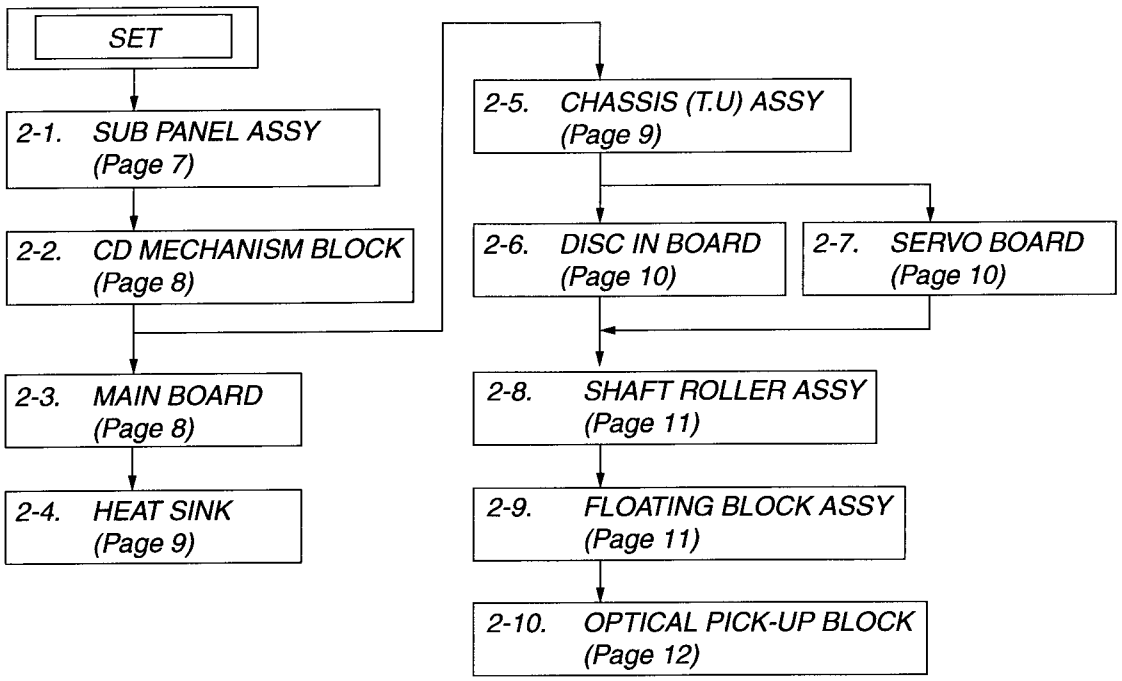
- *Zorg dat het apparaat is uitgeschakeld, alvorens de luidsprekers aan te sluiten.*
- *Gebruik luidsprekers met een impedantie van 4 tot 8 Ohm en let op dat die het vermogen van de versterker kunnen verwerken. Als dit wordt verzuimd, kunnen de luidsprekers ernstig beschadigd raken.*
- *Verbind de gaten (zwart-gestreept) van de luidsprekers niet het chassis van de auto en sluit de aansluitingen van de rechter en linker luidspreker niet op elkaar aan.*
- *Verbind de massakabel van dit toestel niet met de negatieve (–) aansluiting van de luidspreker.*
- *Probeer nooit de luidsprekers parallel aan te sluiten.*
- *Sluit geen actieve luidsprekers (met ingebouwde versterker) aan op de luidsprekerbesturing van dit apparaat. Dit zal leiden tot beschadiging van de actieve luidsprekers. Sluit dus alleen passieve luidsprekers zonder ingebouwde versterker aan.*
- *Om defecten te vermijden mag u de bestaande luidsprekerbedrading in uw auto niet gebruiken wanneer er een gemeenschappelijke negatieve (–) draad is naar de rechter en linker luidsprekers.*
- *Verbind de luidsprekerdraden niet met elkaar.*

Opmerking over aansluiten

Als de luidsprekers en versterker niet correct zijn aangesloten, wordt "FAILURE" in het display weergegeven. In dit geval moet u zorgen dat de luidsprekers en versterker correct zijn aangesloten.

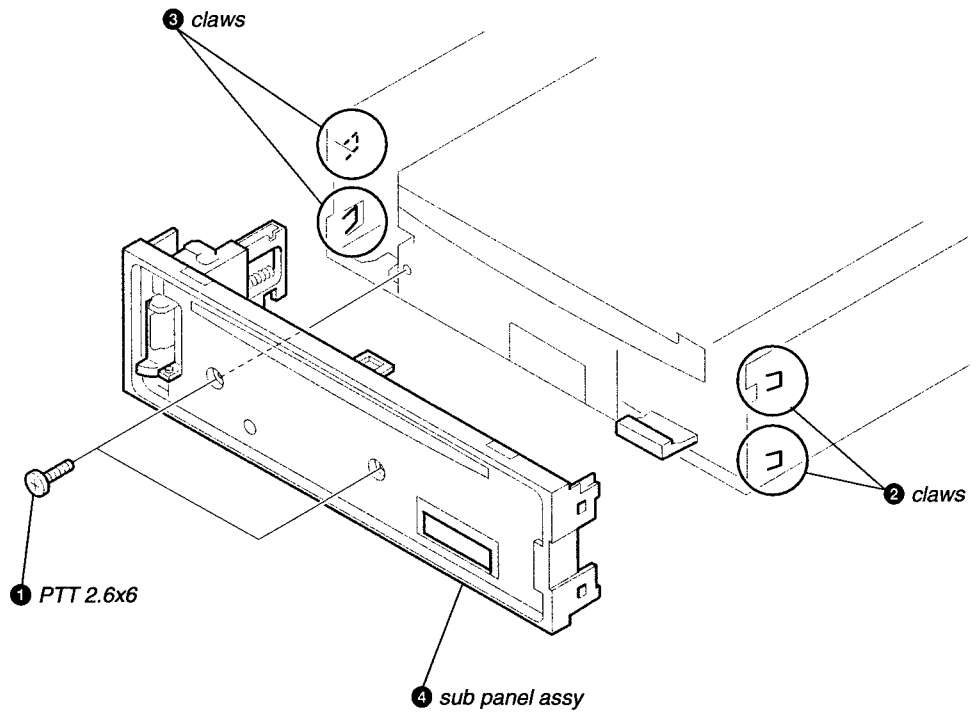
SECTION 2
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

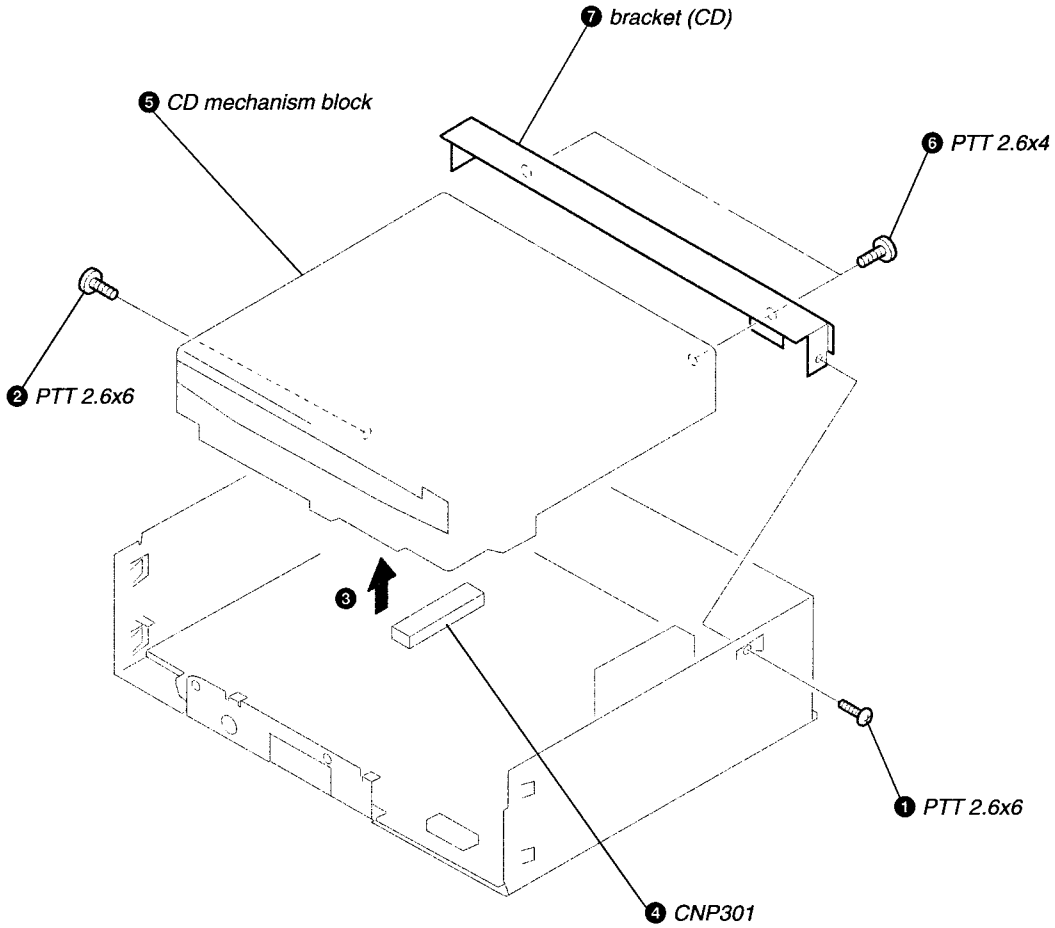

SET
2-1. SUB PANEL ASSY (Page 7)
2-2. CD MECHANISM BLOCK (Page 8)
2-3. MAIN BOARD (Page 8)
2-4. HEAT SINK (Page 9)
2-5. CHASSIS (T.U) ASSY (Page 9)
2-6. DISC IN BOARD (Page 10)
2-7. SERVO BOARD (Page 10)
2-8. SHAFT ROLLER ASSY (Page 11)
2-9. FLOATING BLOCK ASSY (Page 11)
2-10. OPTICAL PICK-UP BLOCK (Page 12)

Note : Follow the disassembly procedure in the numerical order given.

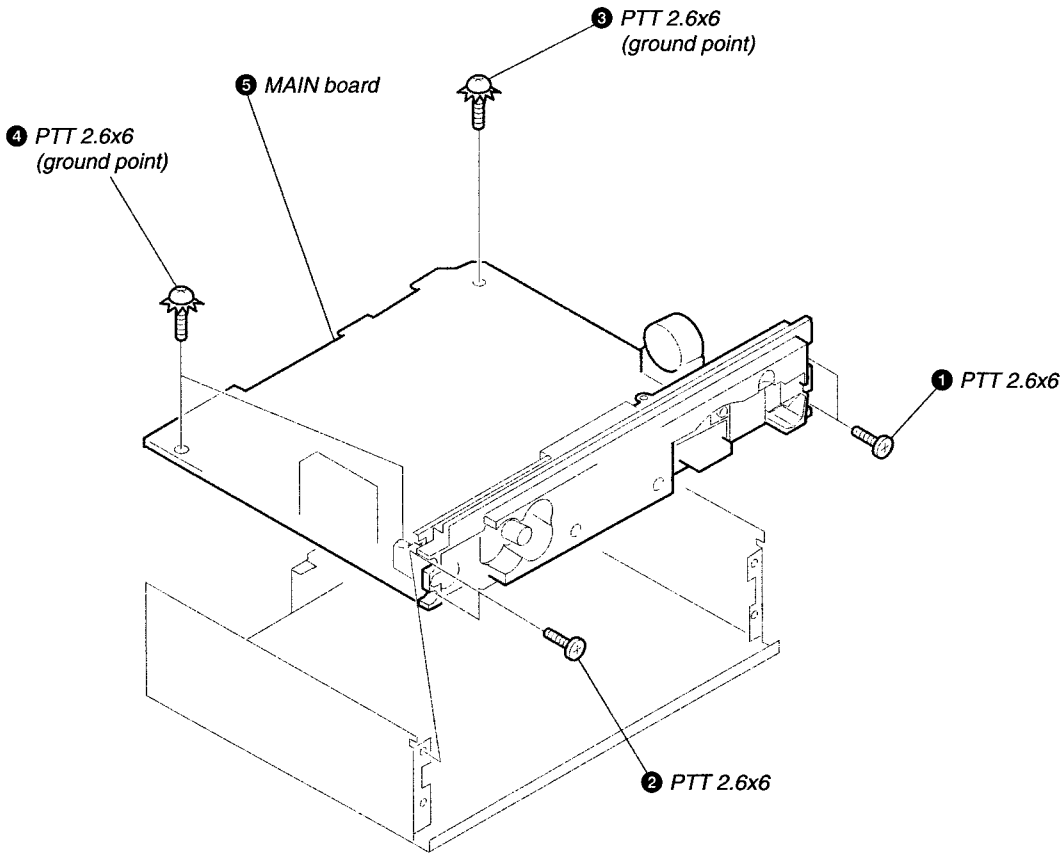
2-1. SUB PANEL ASSY



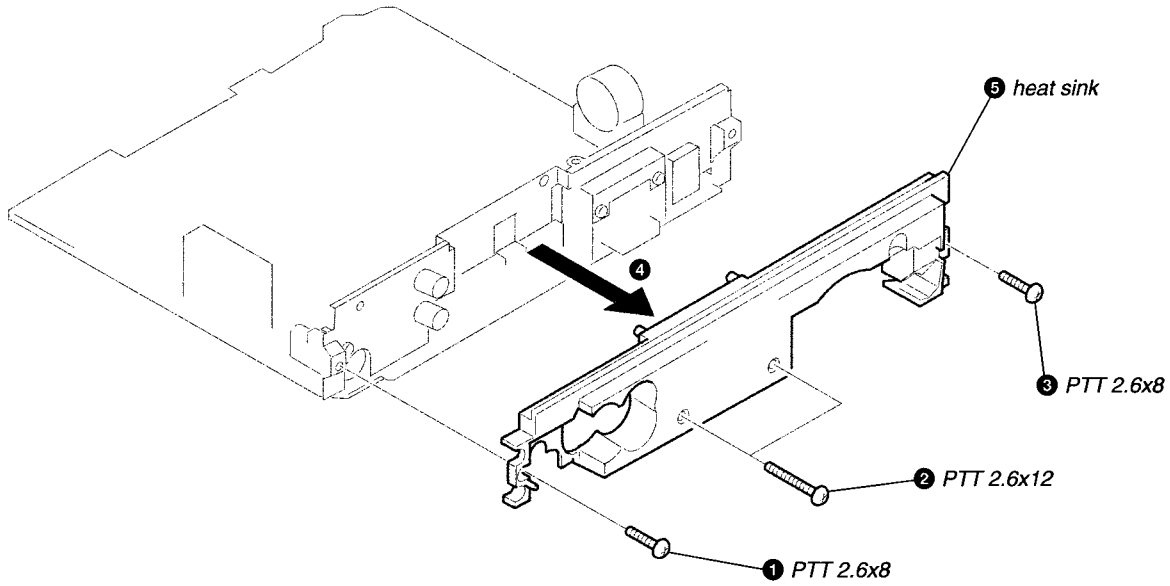
2-2. CD MECHANISM BLOCK



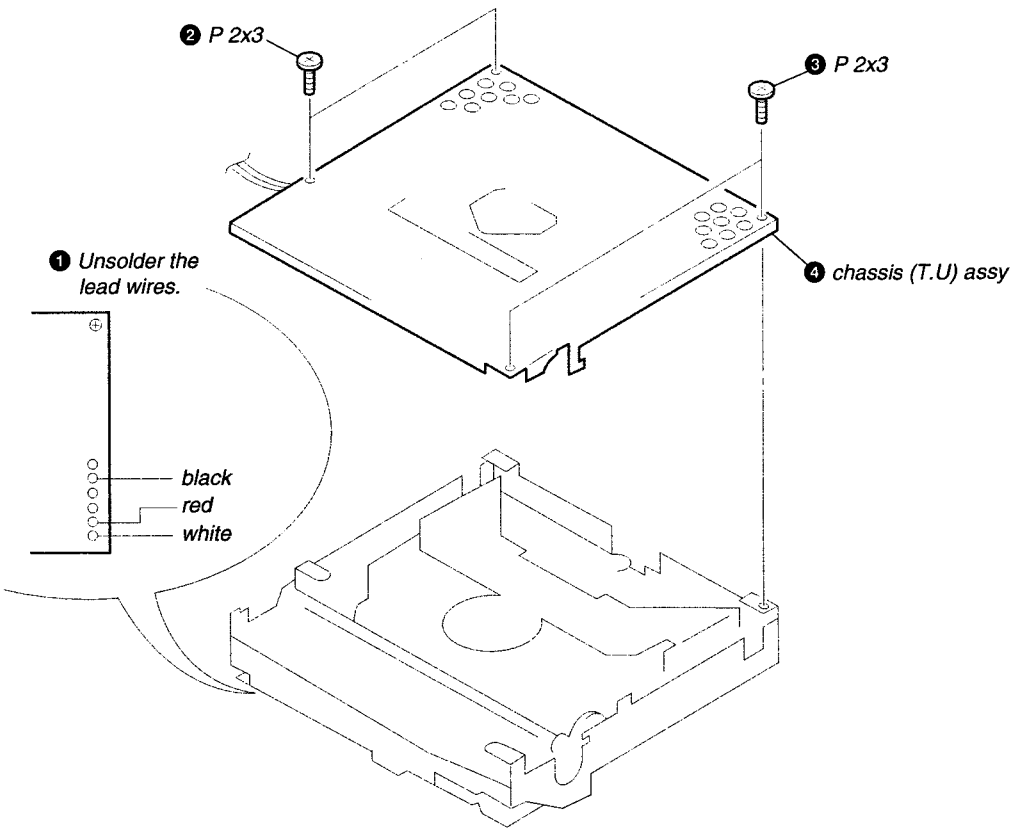
2-3. MAIN BOARD



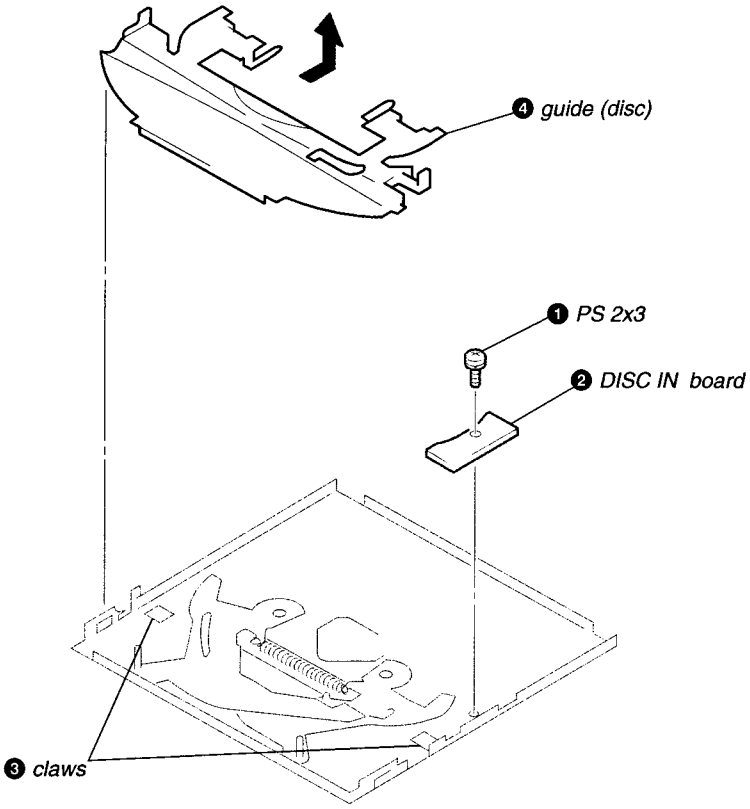
2-4. HEAT SINK



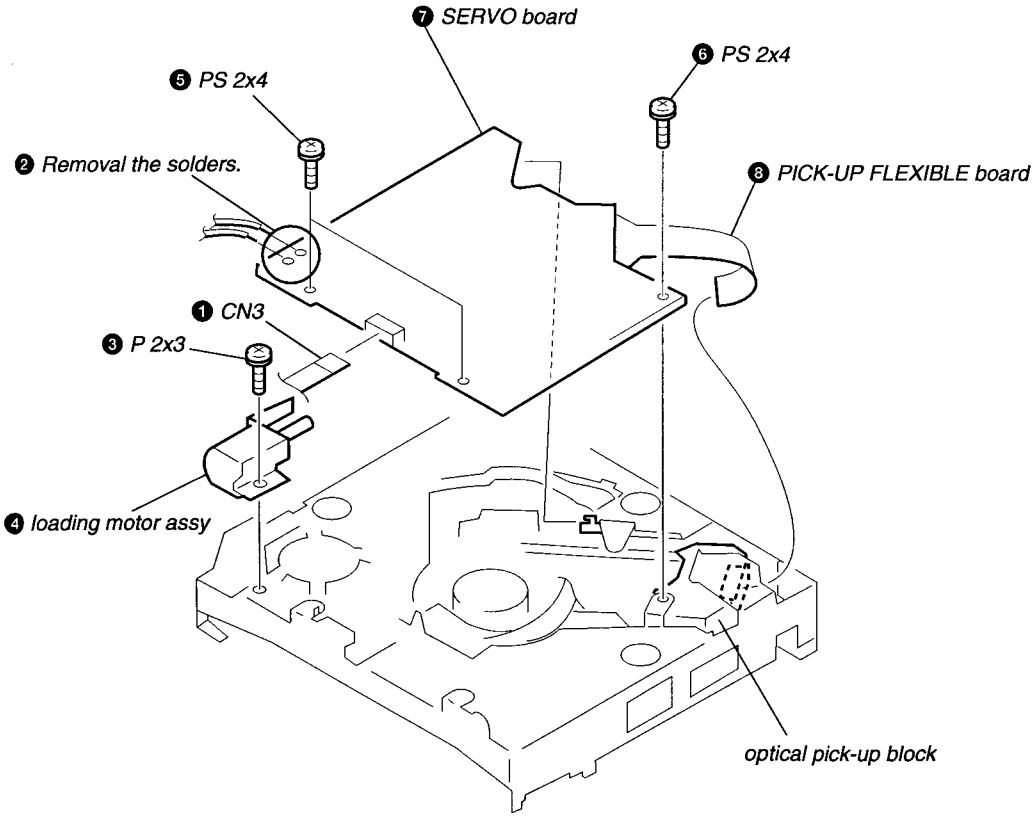
2-5. CHASSIS (T.U) ASSY



2-6. DISC IN BOARD



2-7. SERVO BOARD



2-8. SHAFT ROLLER ASSY

• When installing, take note of the positions arm (roller) and washers. (Fig. 1)

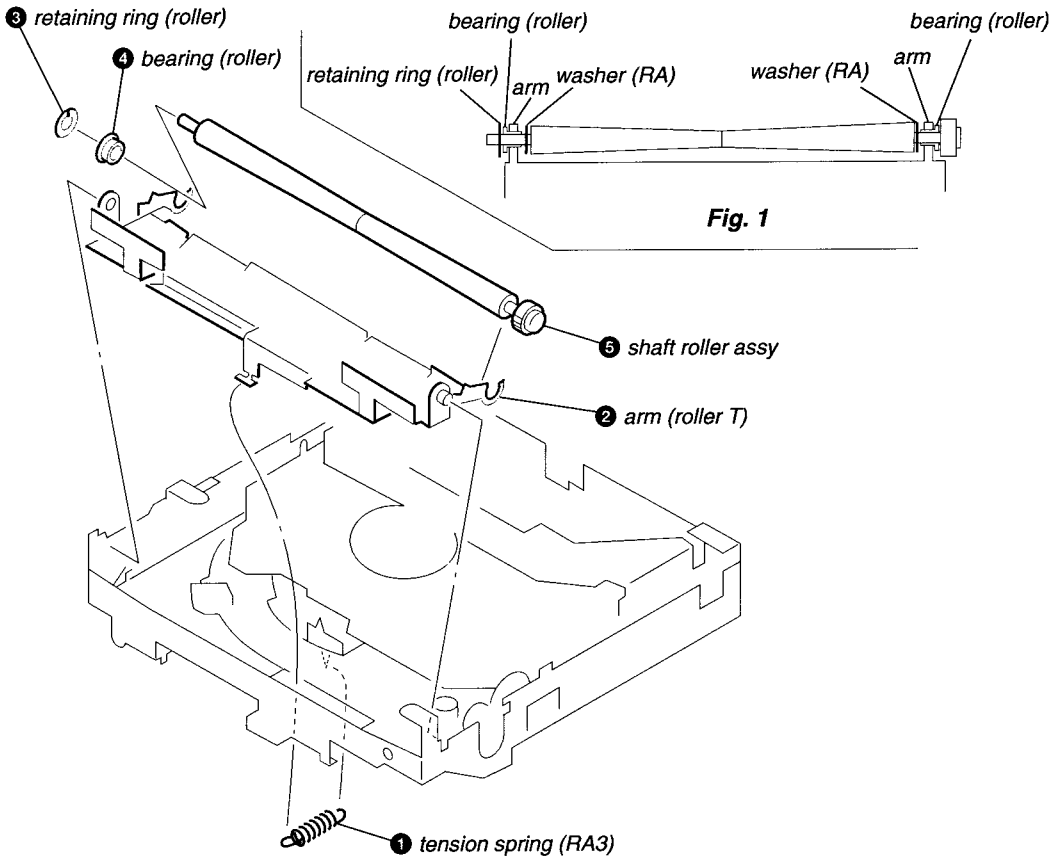
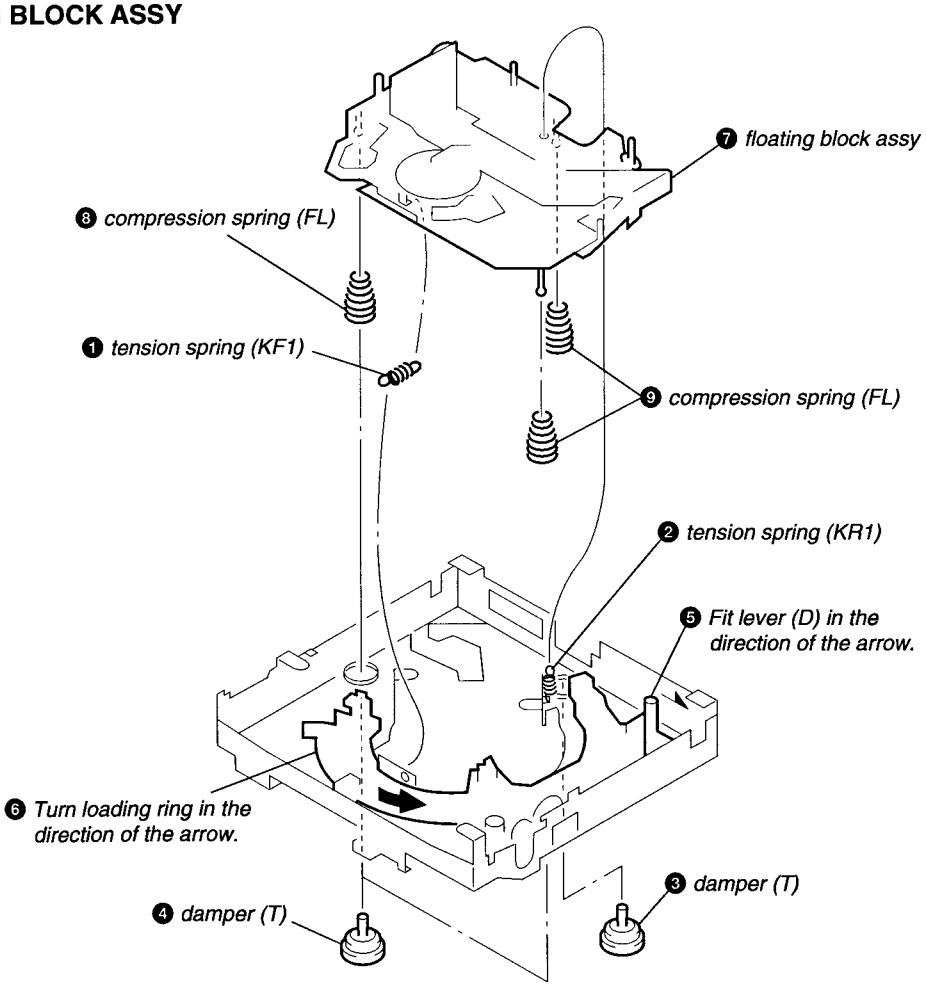
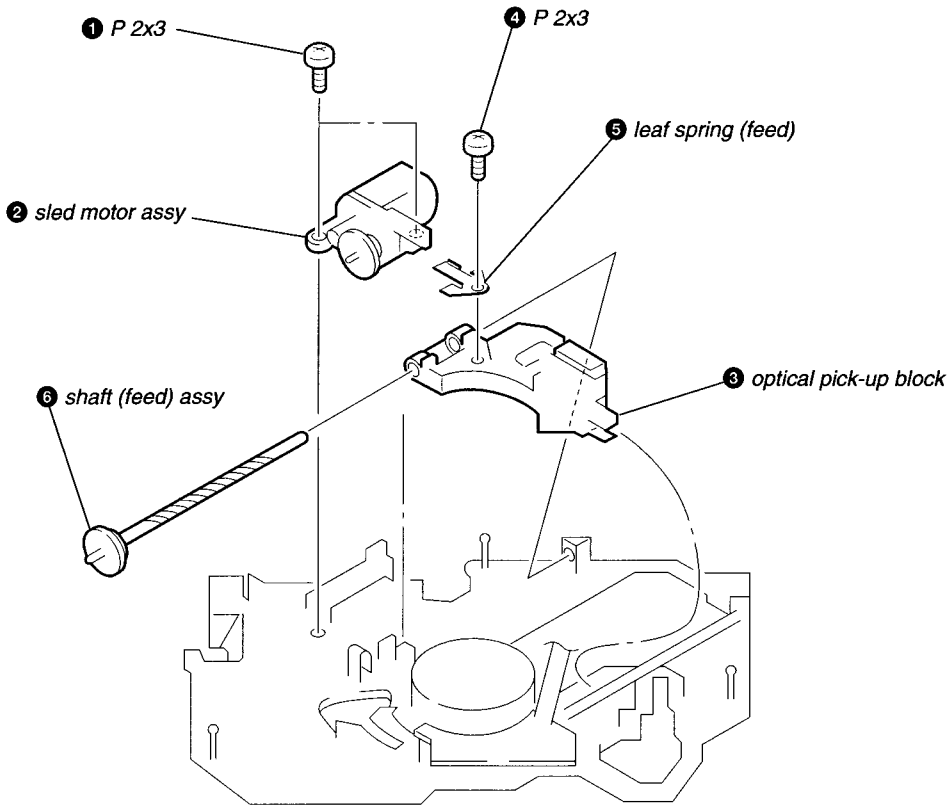


Fig. 1

2-9. FLOATING BLOCK ASSY


❼ floating block assy
❽ compression spring (FL)
❶ tension spring (KF1)
❾ compression spring (FL)
❷ tension spring (KR1)
❺ Fit lever (D) in the direction of the arrow.
❻ Turn loading ring in the direction of the arrow.
❸ damper (T)
❹ damper (T)

2-10. OPTICAL PICK-UP BLOCK



SECTION 3
DIAGRAMS

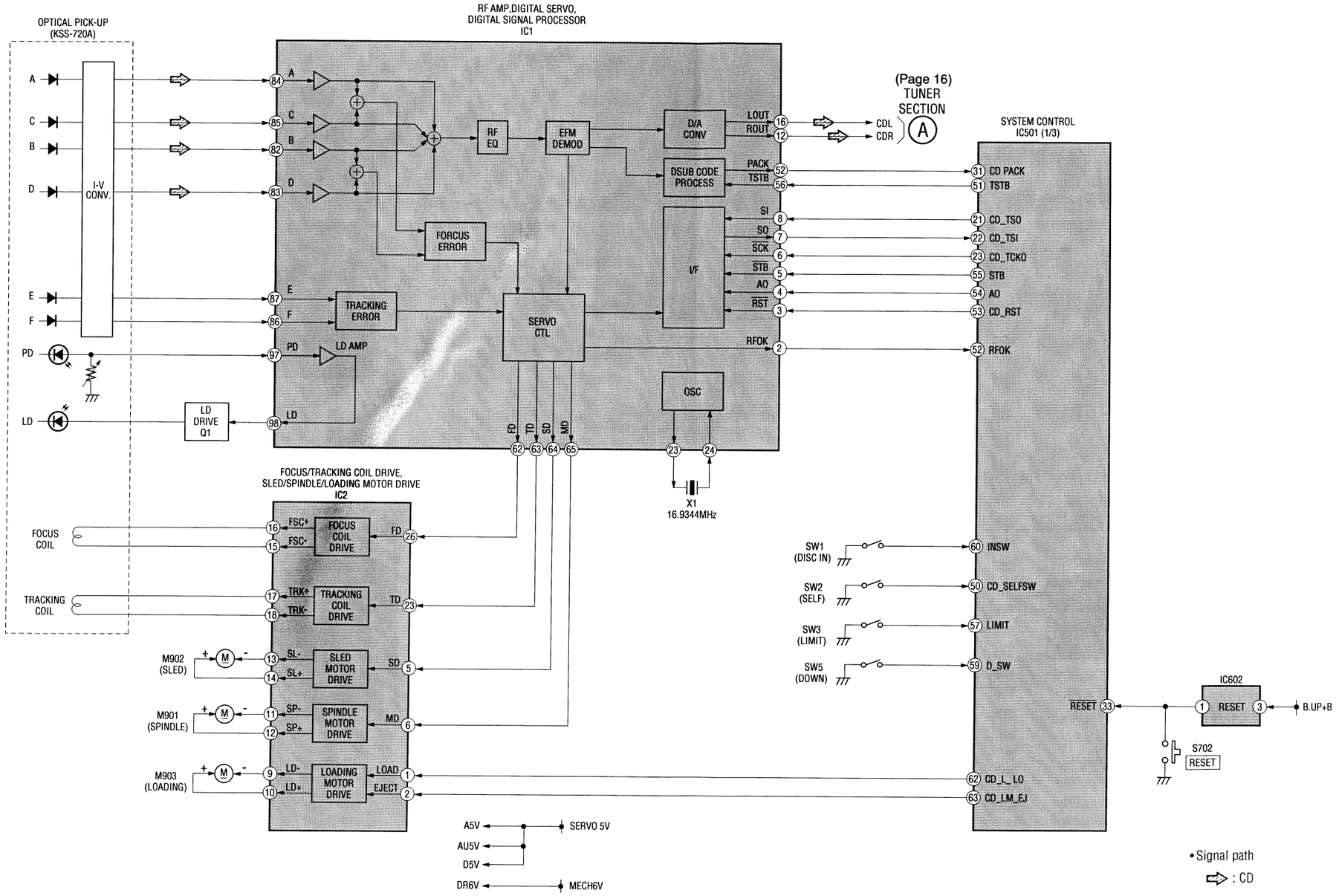
3-1. IC PIN DESCRIPTION

• IC501 MN101C49KSG (SYSTEM CONTROL)

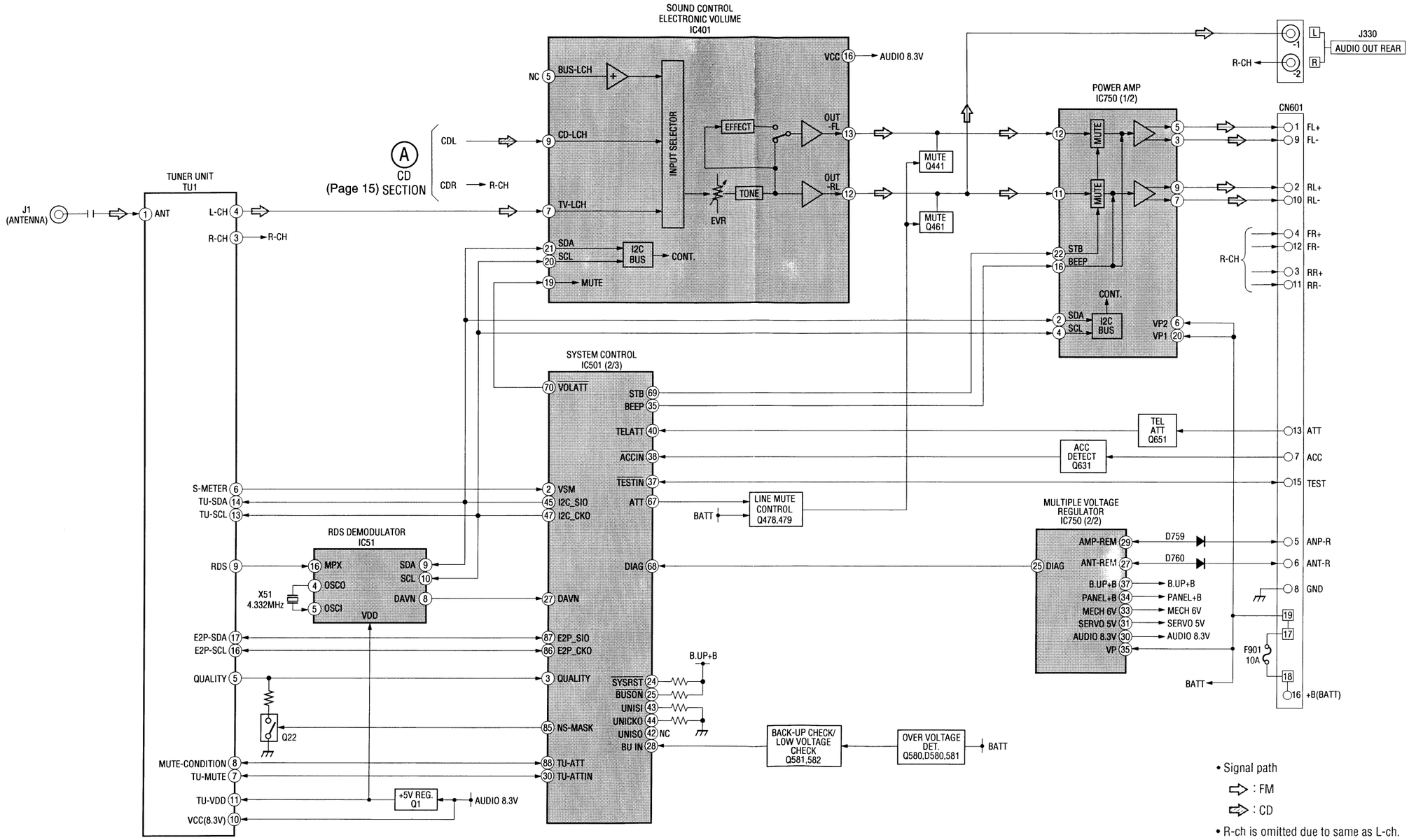
Pin No.	Pin Name	I/O	Pin Description
1	VREF–	—	A/D converter power supply (–) pin
2	VSM	I	S-meter voltage detection input
3	QUALITY	I	Noise detection input
4, 5	KEYIN1, 0	I	Key input 1, 0
6	RCIN0	I	Rotary commander key input
7 – 9	NIL	I	Not used. (Fixed at L in this set)
10	VREF+	—	A/D converter power supply (+) pin (+5 V)
11	VDD	—	Power supply pin (+5 V)
12	OSCOUT	O	Main clock output (18.432 MHz)
13	OSCIN	I	Main clock input (18.432 MHz)
14	VSS	—	Ground
15	XIN	I	Sub clock input (32.768 kHz)
16	XOUT	O	Sub clock output (32.768 kHz)
17	MMOD	I	Not used. (Fixed at L in this set)
18	LCDSO	O	Serial data output for LCD driver IC.
19	LCDCE	O	Chip enable output for LCD driver IC.
20	LCDCKO	O	Serial clock output for LCD driver IC.
21	CD_TSO	O	Serial data output for CD servo IC.
22	CD_TSI	I	Serial data input from CD servo IC.
23	CD_TCKO	O	Serial clock output for CD servo IC.
24	$\overline{\text{SYSRST}}$	O	Not used. (Fixed at H in this set)
25	$\overline{\text{BUSON}}$	O	Not used. (Fixed at H in this set)
26	KEYACK	I	Key acknowledge detection input
27	DAVN	I	RDS data block synchronization detection input
28	BUIN	I	Backup power supply input
29	SIRCS	I	SIRCS input
30	TU_ATTIN	I	Tuner attenuator control input
31	CD_PACK	I	CD text pack synchronization signal input from CD servo IC.
32	NC (VCC)	—	Power supply pin (+5 V)
33	$\overline{\text{RESET}}$	I	Microcomputer reset input
34	NOSE-SW	I	Not used. (Fixed at H in this set)
35	BEEP	O	Beep output
36	NC	O	Not used. (Open)
37	$\overline{\text{TESTIN}}$	I	Test mode detection input
38	$\overline{\text{ACCIN}}$	I	Accessory power supply detection input
39	NC	O	Not used. (Open)
40	TELATT	I	Telephone attenuator detection input
41	NC (VCC)	I	Not used. (Fixed at H in this set)
42	UNISO	O	Not used. (Open)
43	UNISI	I	Not used. (Fixed at L in this set)
44	UNICKO	O	Not used. (Fixed at L in this set)
45	I2C_SIO	I/O	I^2C BUS serial data input/output
46	NC	O	Not used. (Open)
47	I2C_CKO	O	I^2C BUS serial clock output
48, 49	NC	O	Not used. (Open)
50	CD_SELFSW	I	CD mechanism deck Self switch detection input
51	TSTB	O	CD text parameter strobe output for CD servo IC.
52	RFOK	I	RFOK signal input from CD servo IC.
53	CD_RST	O	Reset signal output for CD servo IC.
54	A0	O	Command/parameter discrimination signal output for CD servo IC.
55	STB	O	Data strobe signal output for CD servo IC.

Pin No.	Pin Name	I/O	Pin Description
56	X_EN	O	Not used. (Open)
57	LIMIT	I	CD mechanism deck Limit switch detection input
58	NCO	O	Not used. (Open)
59	D_SW	I	CD mechanism deck Down switch detection input
60	INSW	I	CD mechanism deck Disc in switch detection input
61	NC	O	Not used. (Open)
62	CD_LM_LO	O	CD mechanism deck loading motor control output (Loading direction)
63	CD_LM_EJ	O	CD mechanism deck loading motor control output (Eject direction)
64 – 66	NC	O	Not used. (Open)
67	ATT	O	System attenuator control output
68	DIAG	I	Mode input from power amp IC.
69	STB	O	Standby control output for power amp IC.
70	$\overline{\text{VOLATT}}$	O	Electronic volume attenuator control output
71 – 74	NC	O	Not used. (Open)
75	DOOR-IND	O	Not used. (Open)
76 – 84	NC	O	Not used. (Open)
85	NS_MASK	O	Noise mask output
86	E2P_CKO	O	EEPROM serial clock output
87	E2P_SIO	I/O	EEPROM serial data input/output
88	TU-ATT	O	Tuner attenuator control output
89, 90	NC	O	Not used. (Open)
91	$\overline{\text{AD\_ON}}$	O	Key power supply control output
92, 93	NC	O	Not used. (Open)
94	$\overline{\text{PANEL\_SW}}$	I	Front panel OPEN/CLOSE detection input
95	DAVSS	—	D/A converter power supply (–) pin
96	COLSW	I	Not used. (Open)
97	FLASH_W	I	Flash microcomputer write detection input
98	RCIN1	I	Rotary commander SHIFT key input
99	NC	O	Not used. (Open)
100	DAVDD	—	D/A converter power supply (+) pin (+5 V)

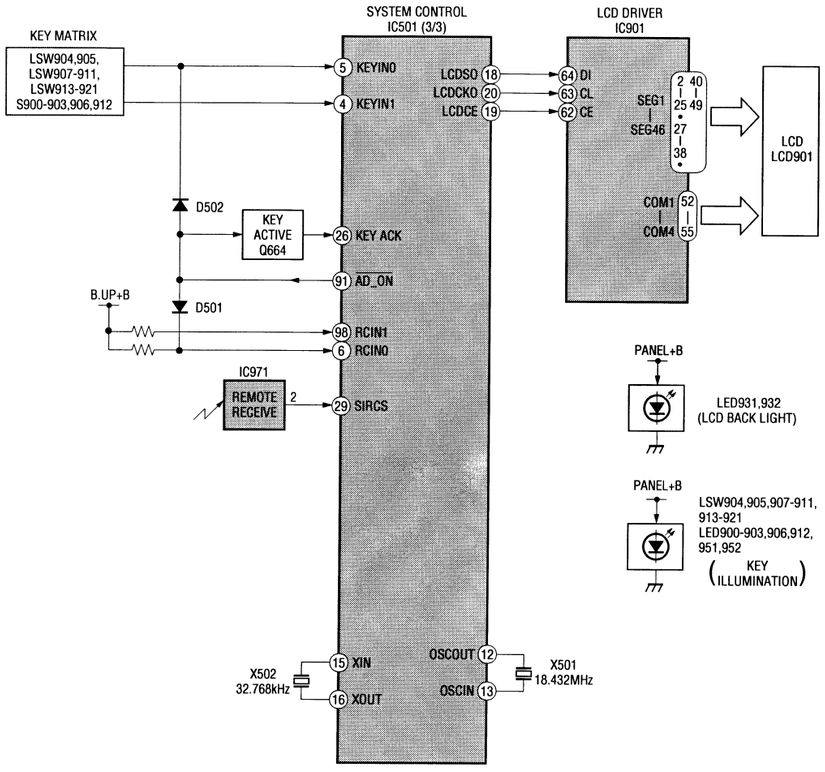
3-2. BLOCK DIAGRAM — CD SECTION —



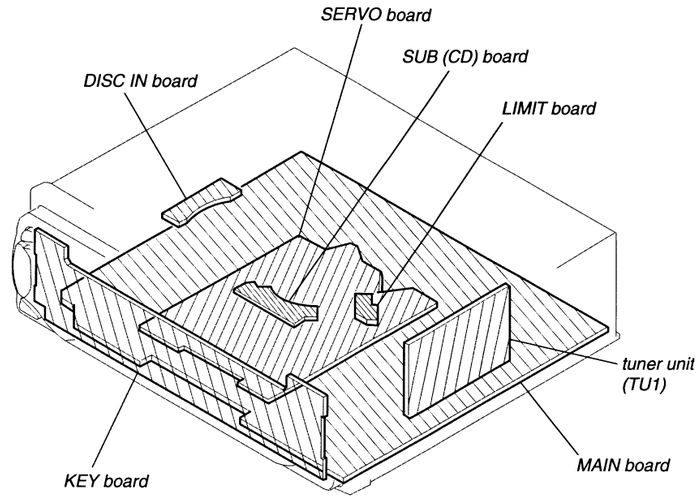
3-3. BLOCK DIAGRAM — TUNER SECTION —



3-4. BLOCK DIAGRAM — DISPLAY SECTION —



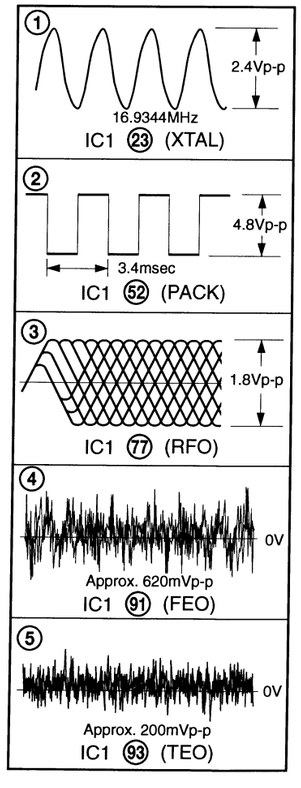
3-5. CIRCUIT BOARDS LOCATION



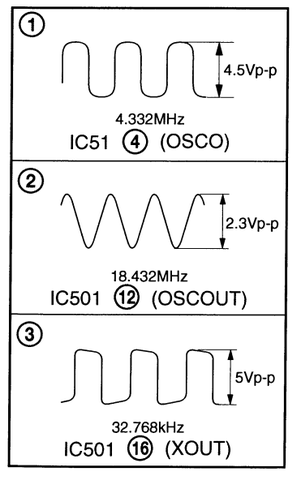
- **Waveforms**

— Servo Board —

(MODE: CD PLAY)



— Main Board —



3-6. PRINTED WIRING BOARDS — CD MECHANISM SECTION — • Refer to page 17 for Circuit Boards Location. : **Uses unleaded solder.**

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS. (In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ▭ : panel designation.

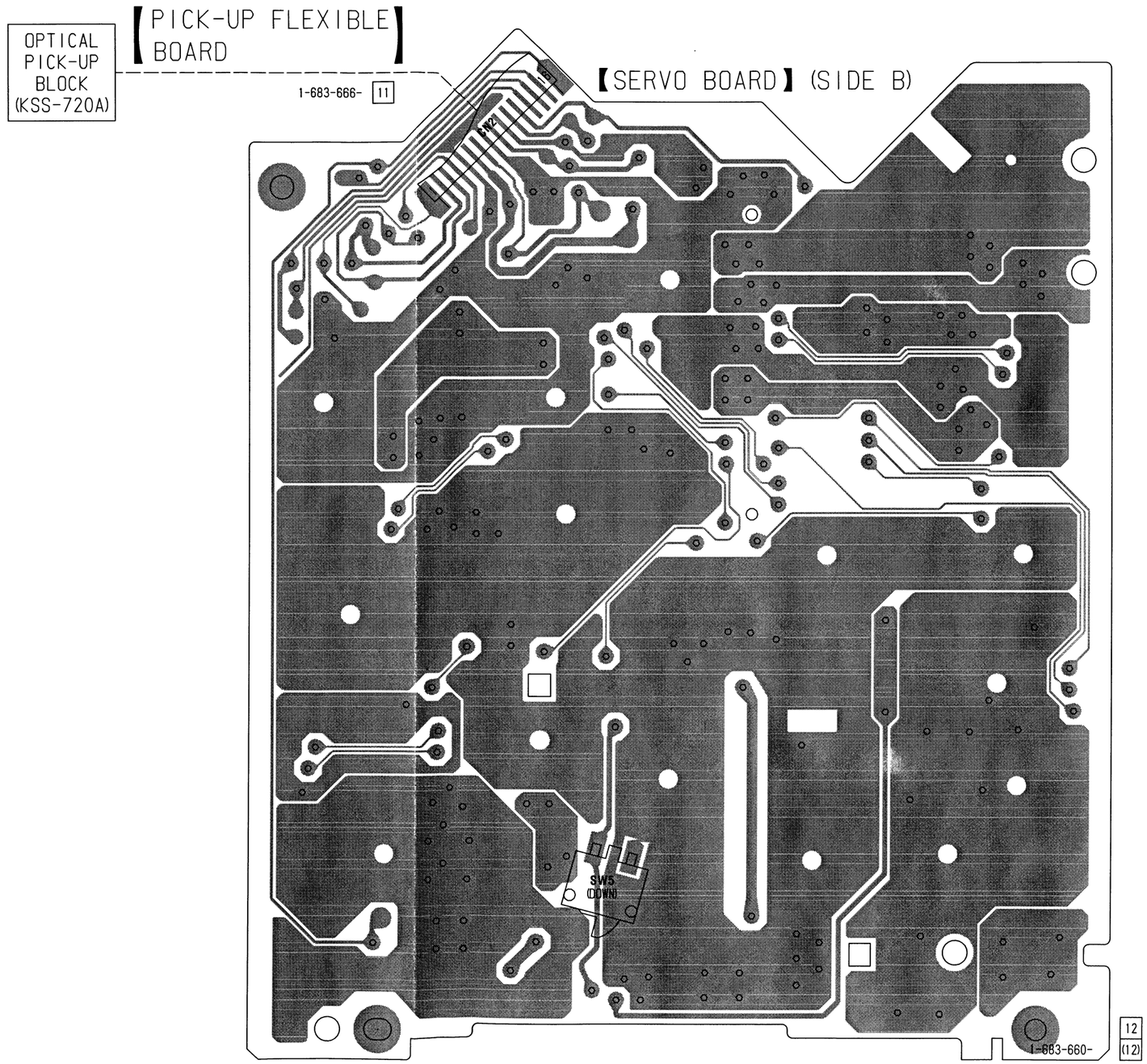
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▬▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : MW
  - ⇨ : CD

for printed wiring boards:

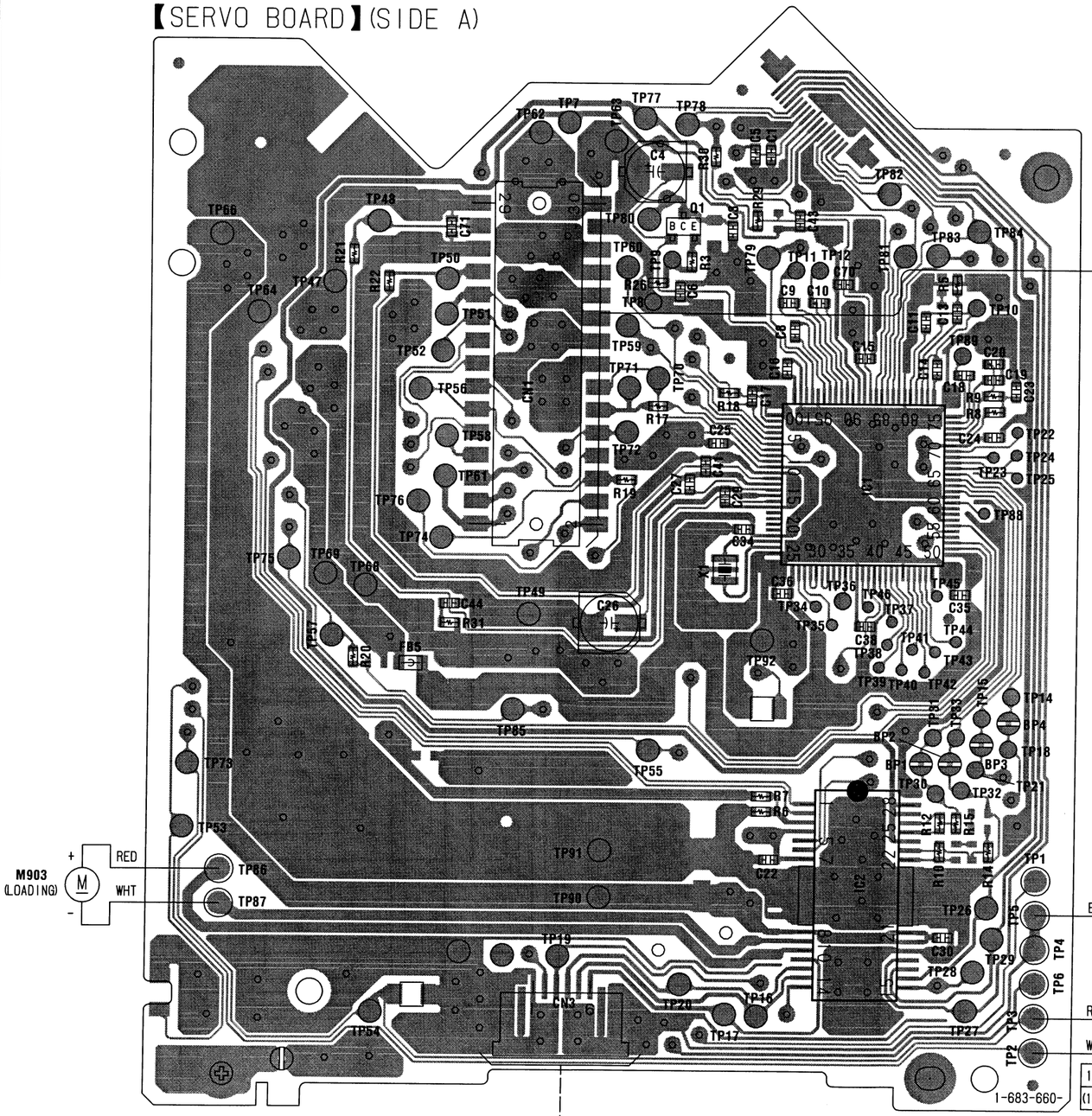
- o—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ○ : Through hole.
- ▩ : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

Caution:
Pattern face side: (Side B) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A) Parts on the parts face side seen from the parts face are indicated.



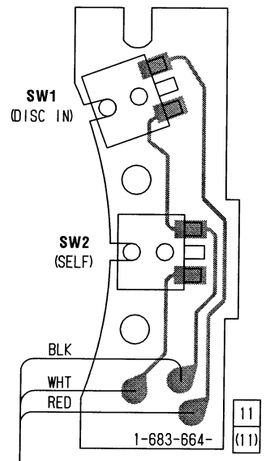
: Uses unleaded solder.

【SERVO BOARD】(SIDE A)

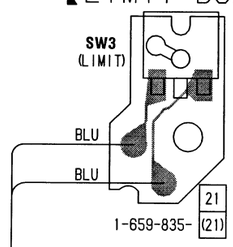


A MAIN BOARD CNP301 (Page 21)

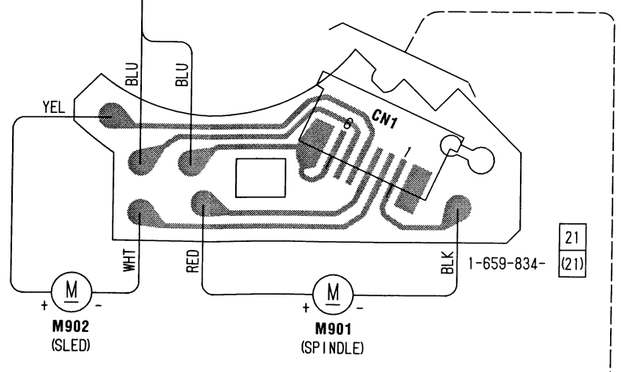
【DISC IN BOARD】



【LIMIT BOARD】

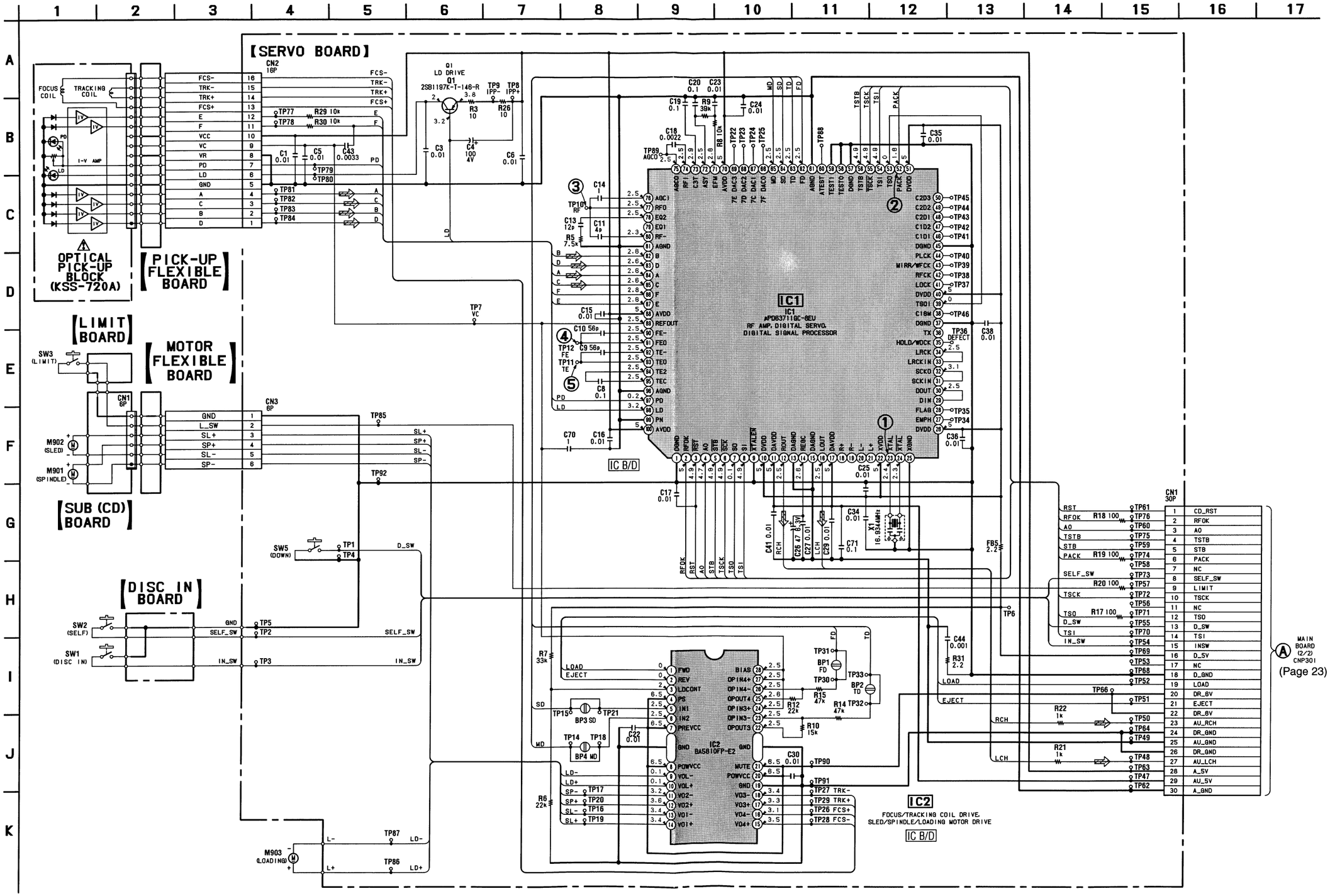


【SUB (CD) BOARD】



【MOTOR FLEXIBLE BOARD】1-683-665- 11

3-7. SCHEMATIC DIAGRAM — CD MECHANISM SECTION — • Refer to page 17 for Waveforms and page 18 for Common Note on Schematic Diagram.
• Refer to page 26 for IC Block Diagrams.



Note:
- Voltage is dc with respect to ground under no-signal conditions.
  no mark : CD PLAY

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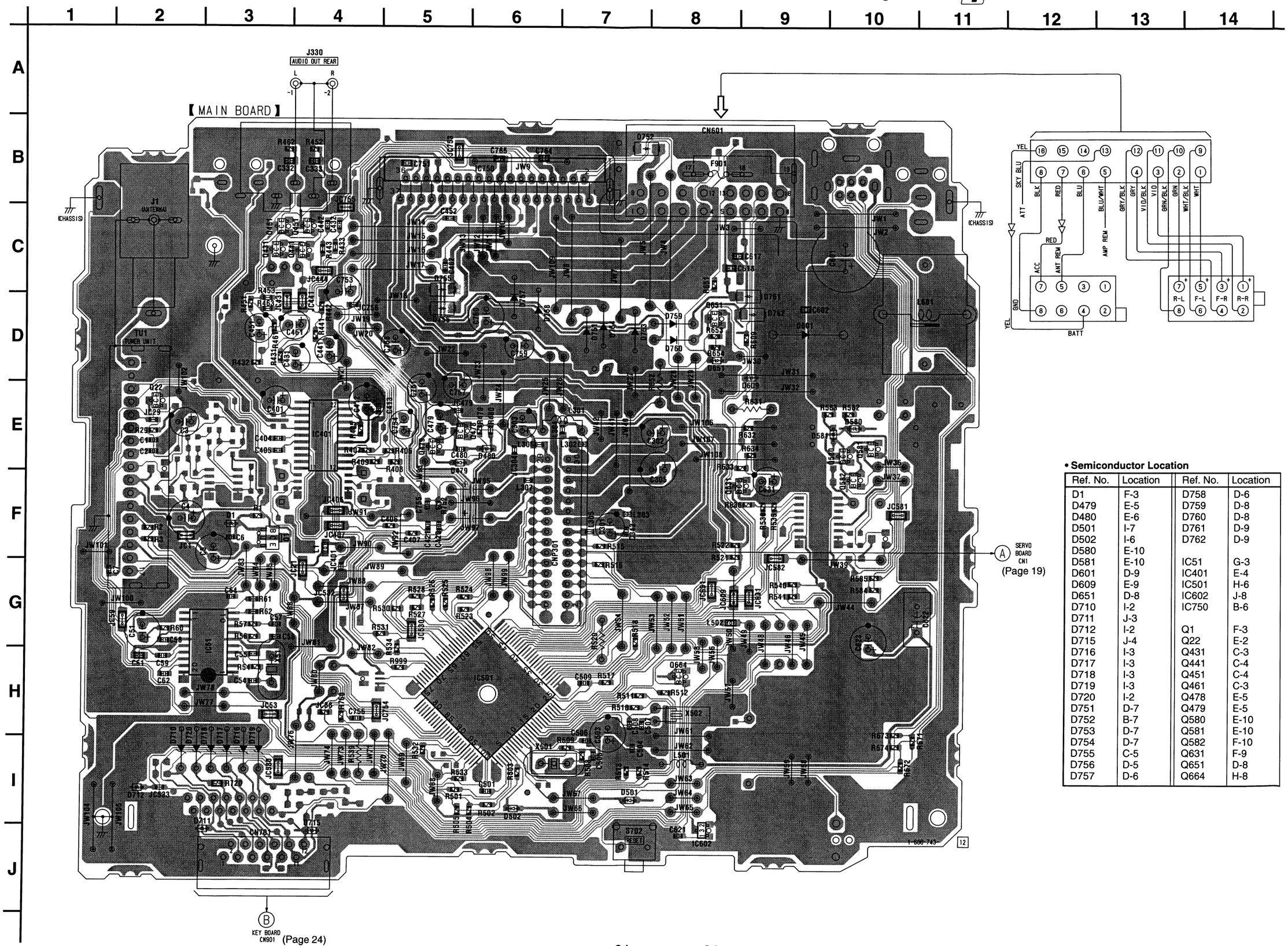
3-8. PRINTED WIRING BOARD — MAIN SECTION — • Refer to page 17 for Circuit Boards Location and page 18 for Common Note on Printed Wiring Boards. : Uses unleaded solder.

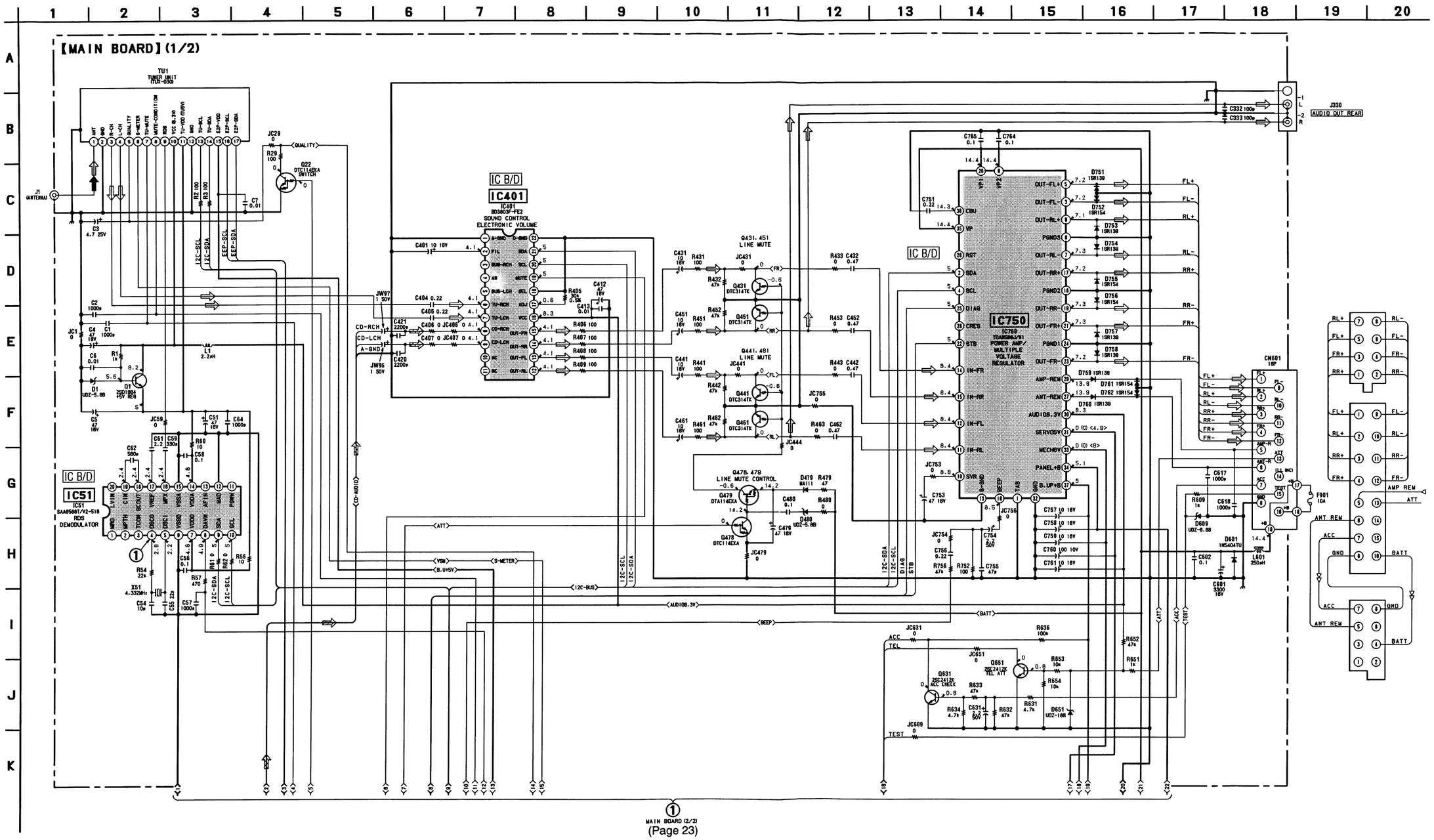


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	F-3	D758	D-6
D479	E-5	D759	D-8
D480	E-6	D760	D-8
D501	I-7	D761	D-9
D502	I-6	D762	D-9
D580	E-10		
D581	E-10	IC51	G-3
D601	D-9	IC401	E-4
D609	E-9	IC501	H-6
D651	D-8	IC602	J-8
D710	I-2	IC750	B-6
D711	J-3		
D712	I-2	Q1	F-3
D715	J-4	Q22	E-2
D716	I-3	Q431	C-3
D717	I-3	Q441	C-4
D718	I-3	Q451	C-4
D719	I-3	Q461	C-3
D720	I-2	Q478	E-5
D751	D-7	Q479	E-5
D752	B-7	Q580	E-10
D753	D-7	Q581	E-10
D754	D-7	Q582	F-10
D755	C-5	Q631	F-9
D756	D-5	Q651	D-8
D757	D-6	Q664	H-8

3-9. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) —

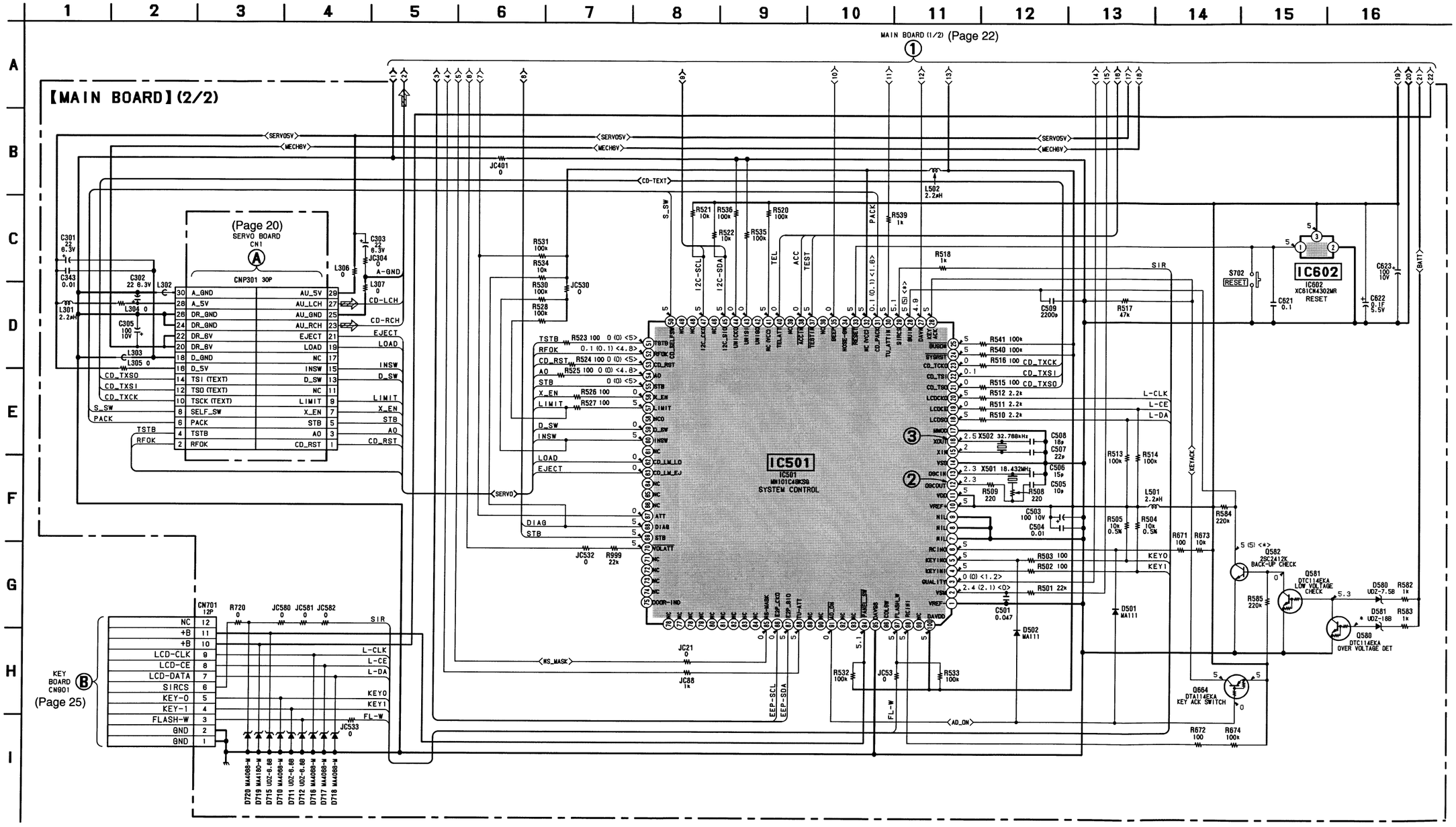
• Refer to page 17 for Waveforms and page 18 for Common Note on Schematic Diagram.
• Refer to page 26 for IC Block Diagrams.



Note:

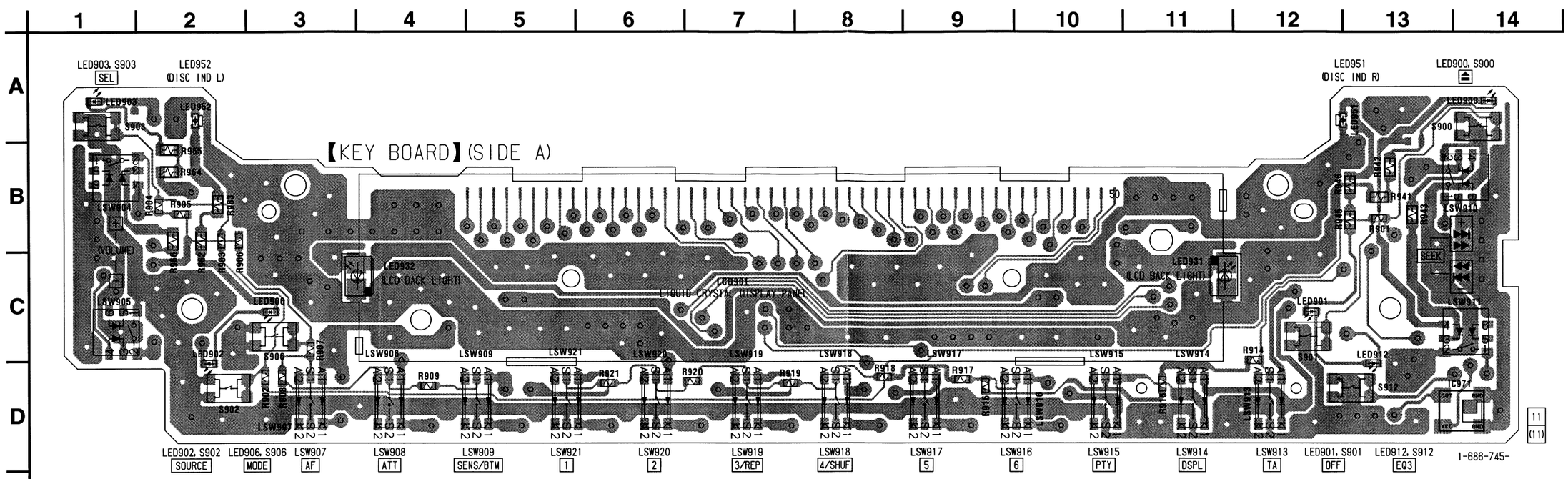
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : MW
  < > : CD PLAY
  * : Impossible to measure

3-10. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) — • Refer to page 18 for Common Note on Schematic Diagram.



Note:
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : MW
  < > : CD PLAY
  * : Impossible to measure

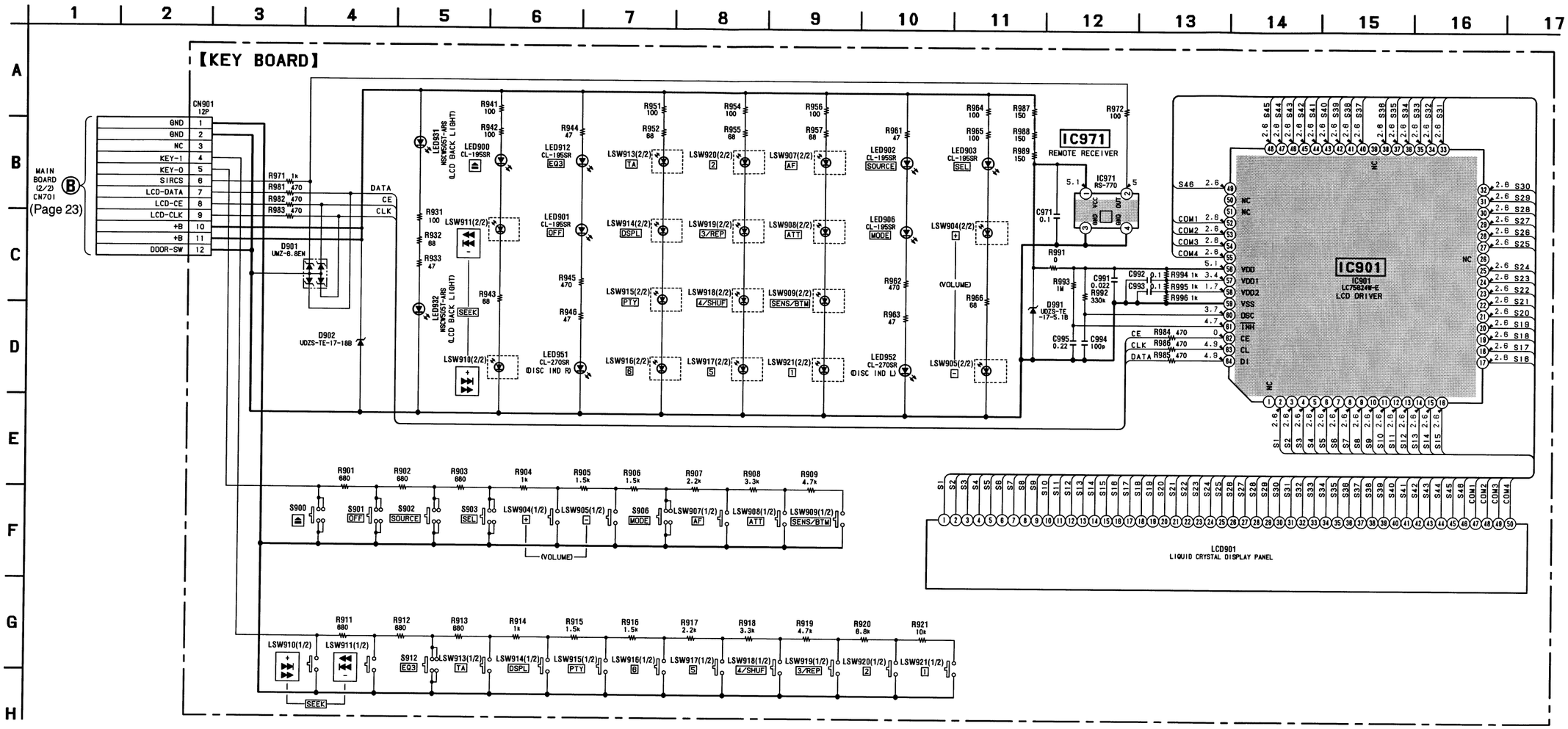
3-11. PRINTED WIRING BOARD — KEY SECTION — • Refer to page 17 for Circuit Boards Location and page 18 for Common Note on Printed Wiring Boards. : Uses unleaded solder.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D901	G-11	LED902	C-2
D902	G-11	LED903	A-1
D991	G-13	LED906	C-3
		LED912	C-13
IC901	G-8	LED931	C-11
IC971	D-14	LED932	C-4
		LED951	A-13
LED900	A-14	LED952	A-2
LED901	C-12		

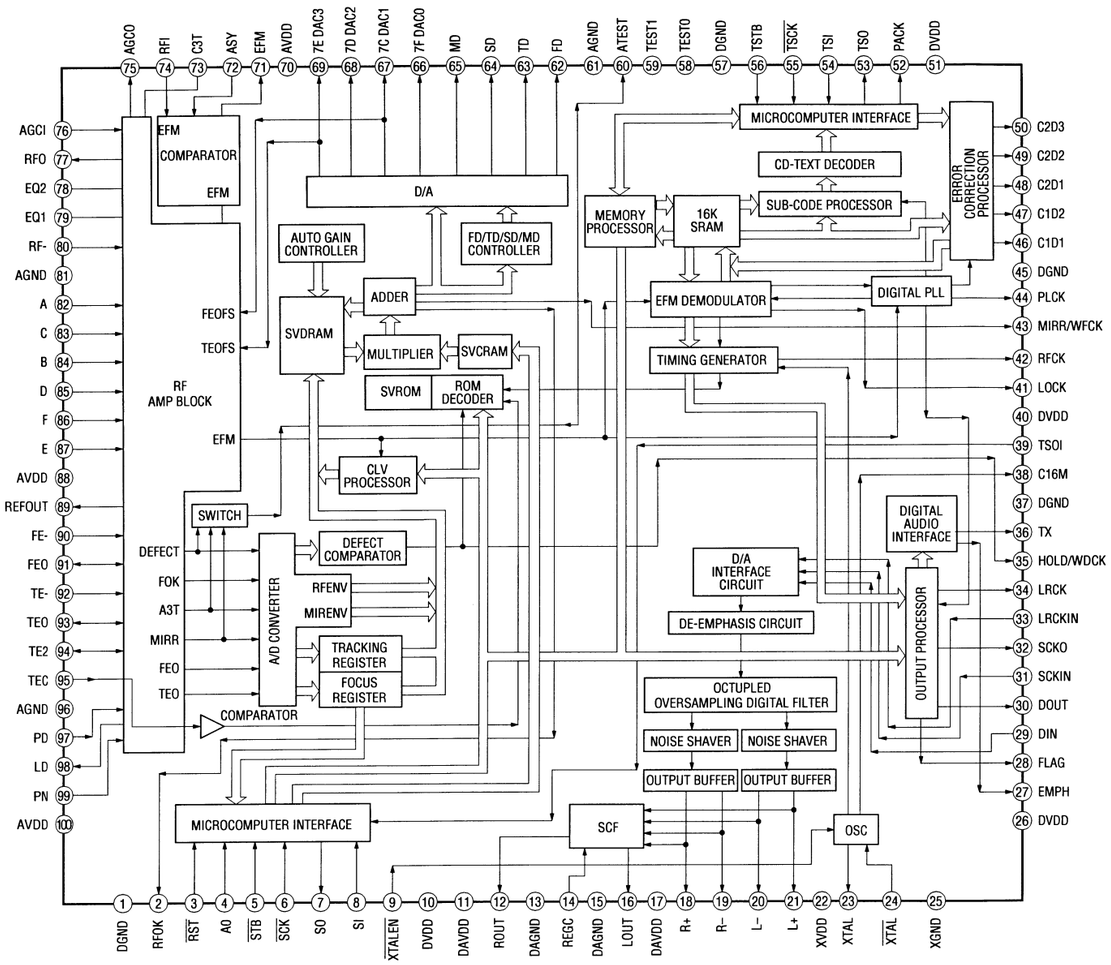
3-12. SCHEMATIC DIAGRAM — KEY SECTION — • Refer to page 18 for Common Note on Schematic Diagram.



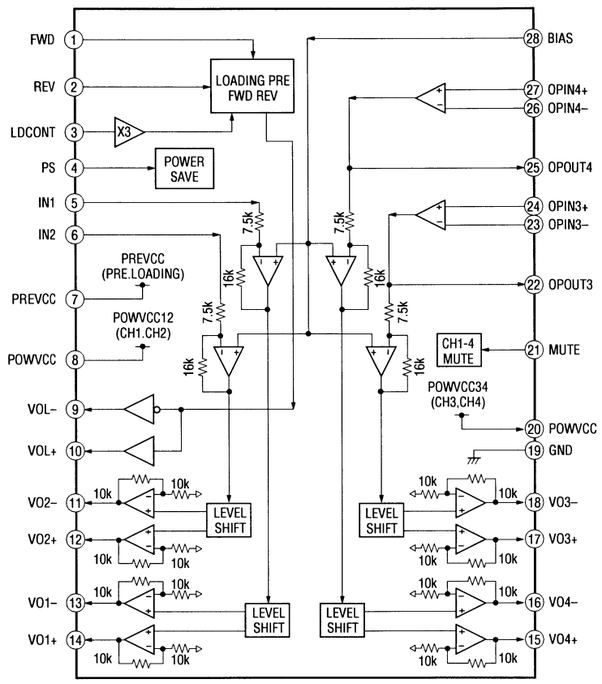
Note:
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

3-13. IC BLOCK DIAGRAMS

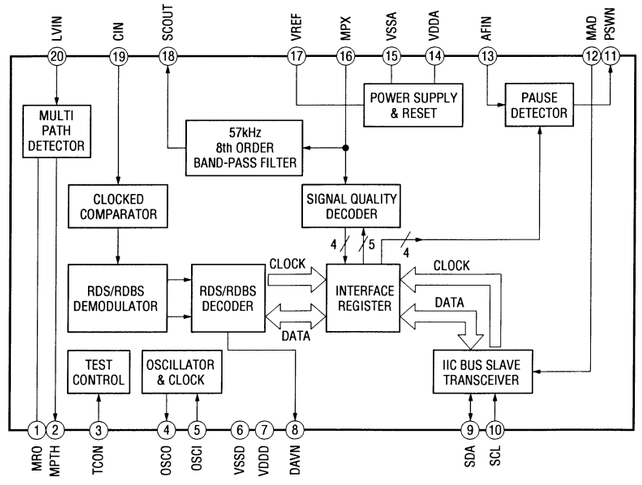
IC1 µPD63711GC-8EU



IC2 BA5810FP-E2

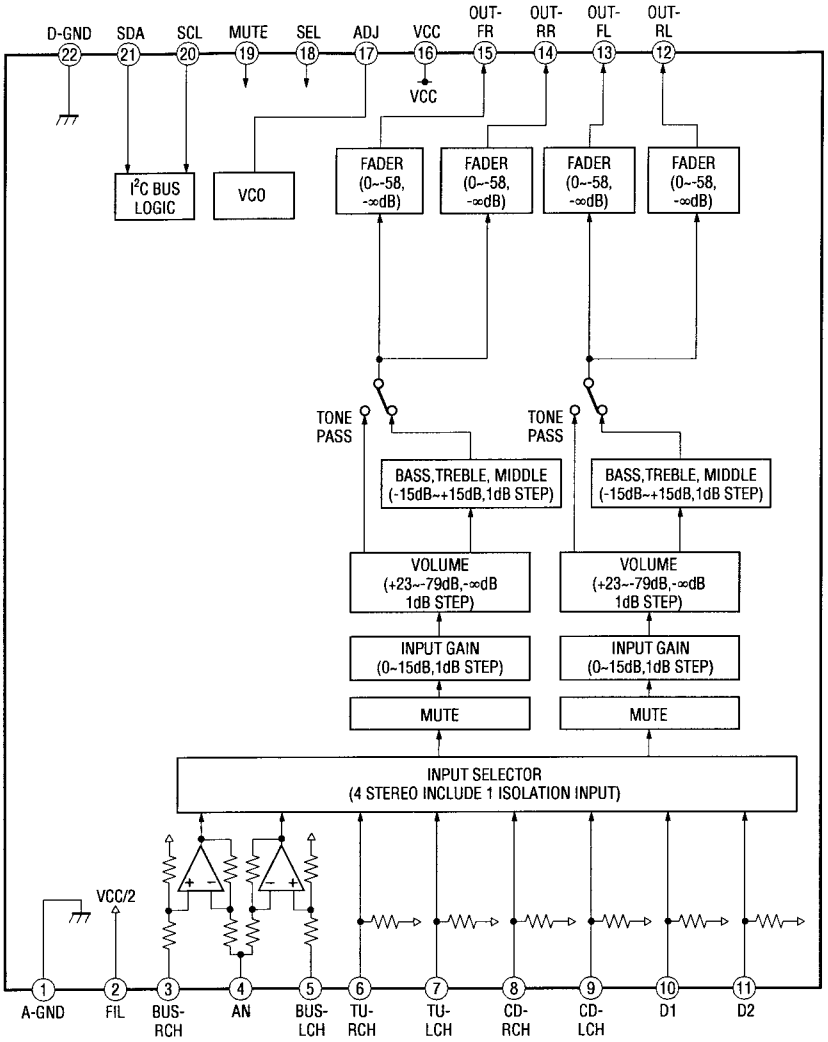


IC51 SAA6588T/V2-518

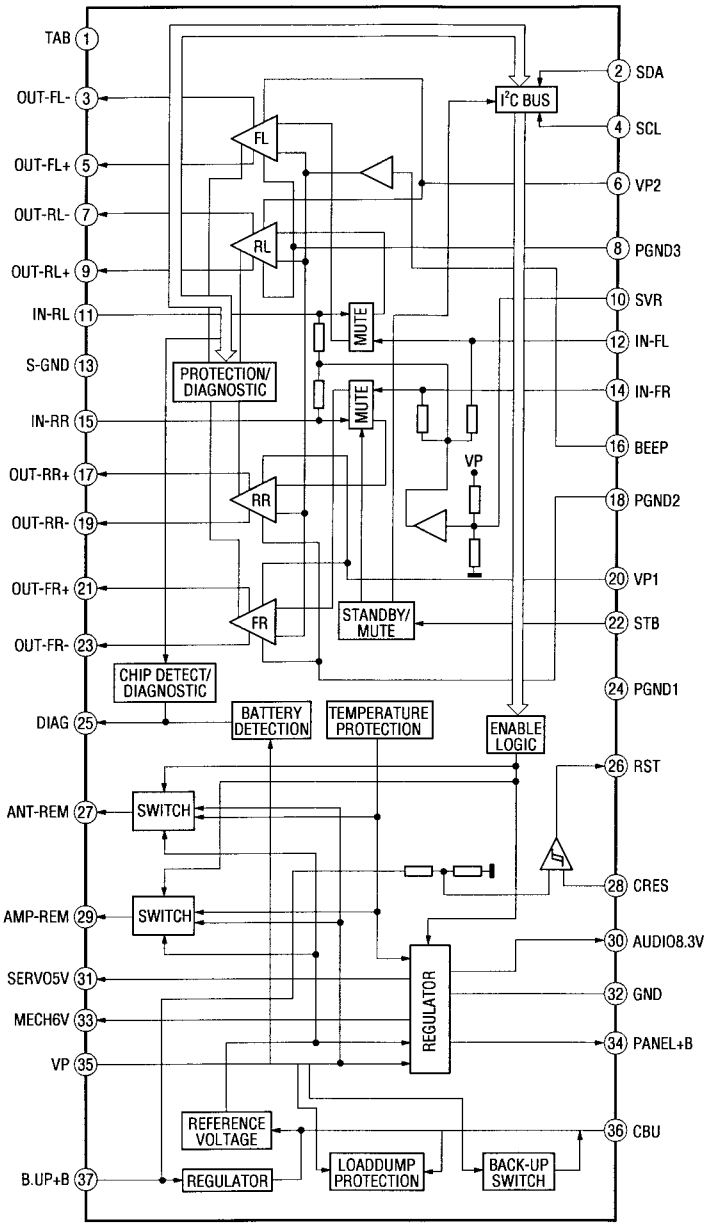


26

IC401 BD3803F-FE2



IC750 TDA8589J/N1



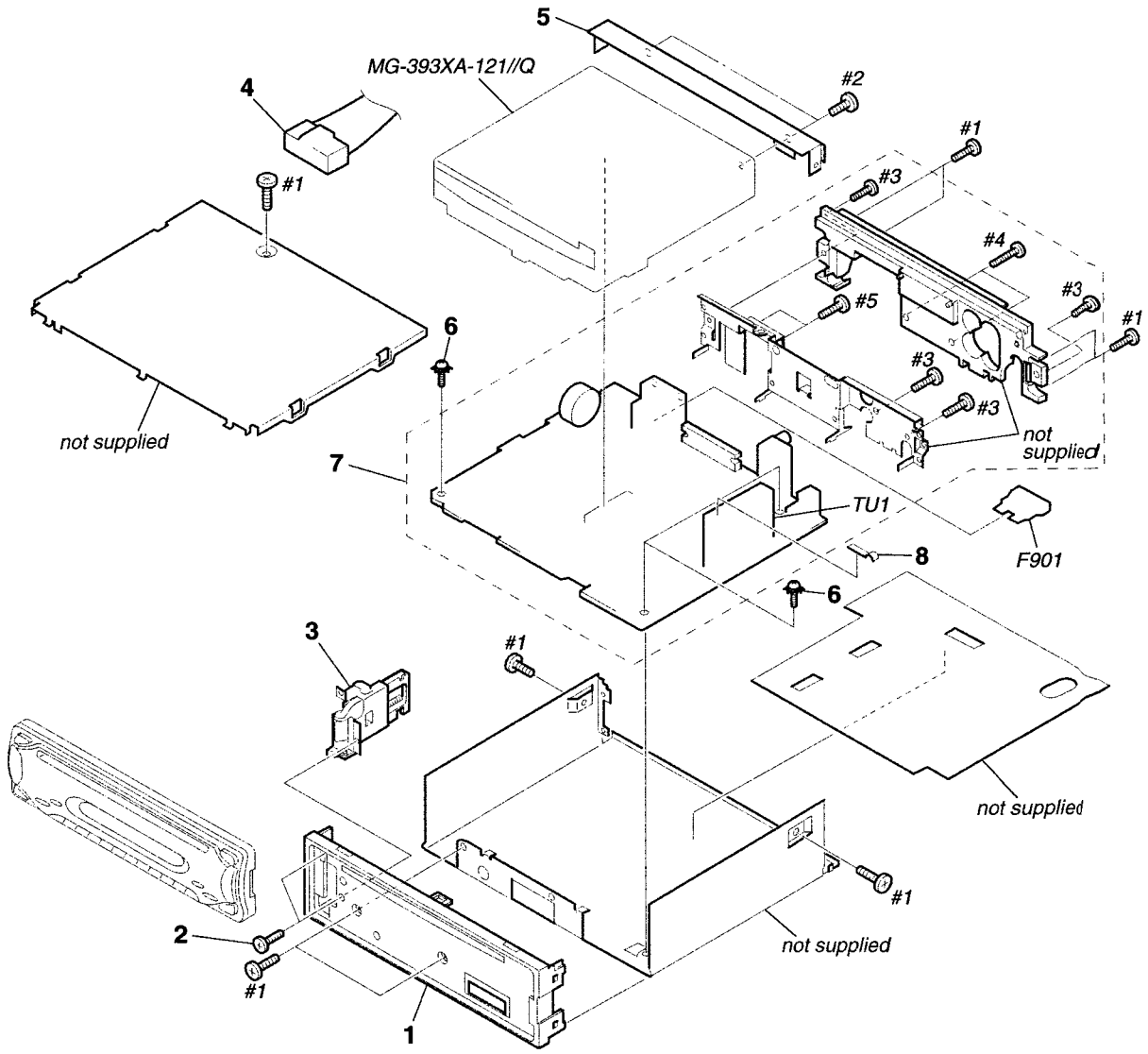
SECTION 4
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

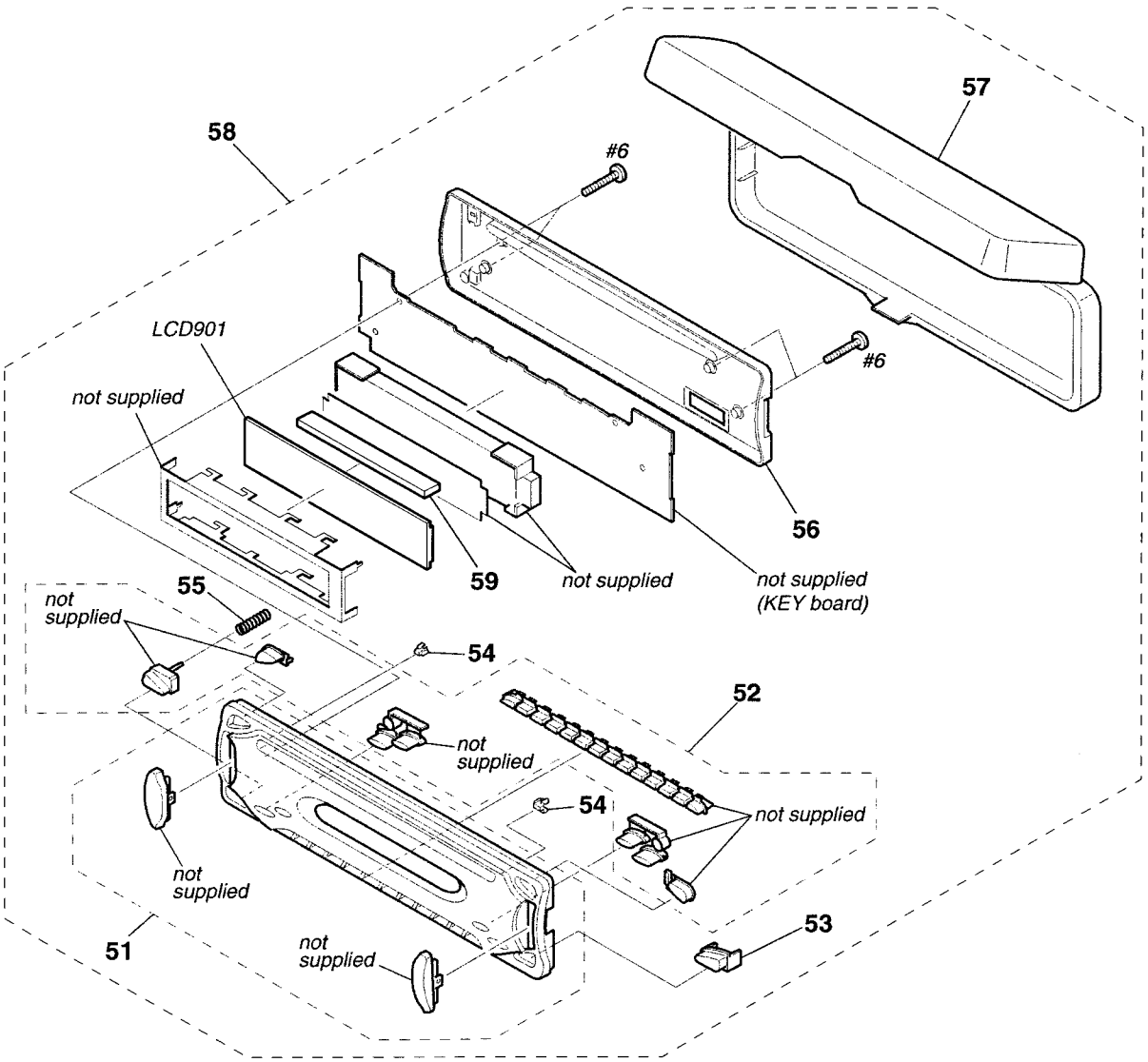
4-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	X-3382-709-1	PANEL ASSY, SUB	
2	3-042-244-11	SCREW (T)	
3	X-3379-876-5	LOCK ASSY (S)	
4	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
5	3-246-450-01	BRACKET (CD)	
6	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
7	A-3274-588-A	MAIN BOARD, COMPLETE	
8	3-246-481-01	PLATE (TU), GROUND	

Ref. No.	Part No.	Description	Remark
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TU1	A-3220-887-A	TUNER UNIT (TUX-030)	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-790-01	SCREW +PTT 2.6X4 (S)	
#3	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#4	7-685-795-09	SCREW +PTT 2.6X12 (S)	
#5	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	

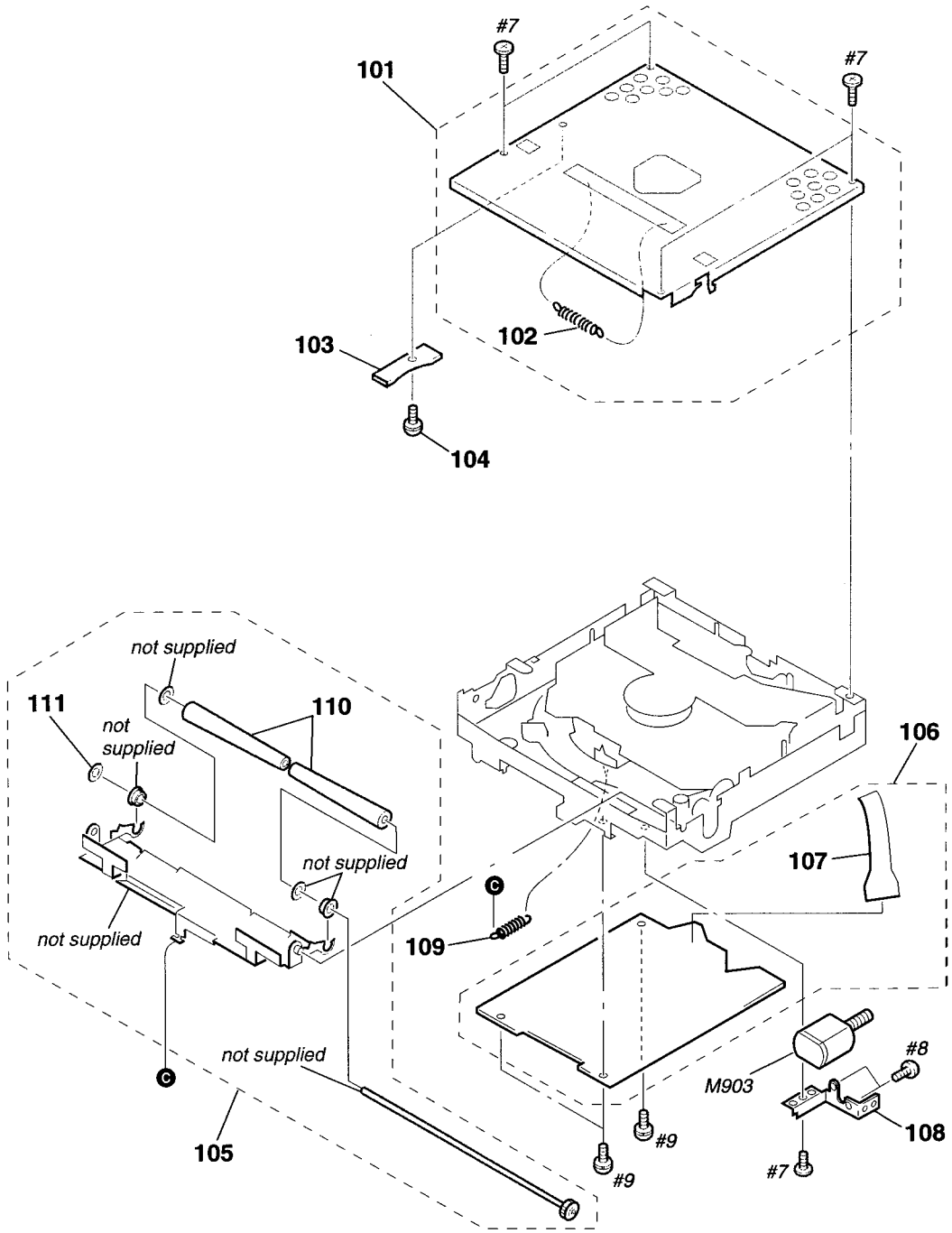
4-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3382-710-1	PANEL SUB ASSY, FRONT	
52	X-3383-104-1	BUTTON ASSY (S)	
53	3-246-463-01	FILTER (IR)	
54	3-246-466-01	PLATE (CD), LIGHT GUIDE	
55	3-246-479-01	SPRING (RELEASE)	
56	3-246-454-01	PANEL (CD), FRONT BACK	

Ref. No.	Part No.	Description	Remark
57	X-3383-264-1	CASE ASSY (for FRONT PANEL)	
58	A-3315-901-A	PANEL COMPLETE ASSY, FRONT	
59	1-694-977-11	CONDUCTIVE BOARD, CONNECTION	
LCD901	1-805-078-11	DISPLAY PANEL, LIQUID CRYSTAL	
#6	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	

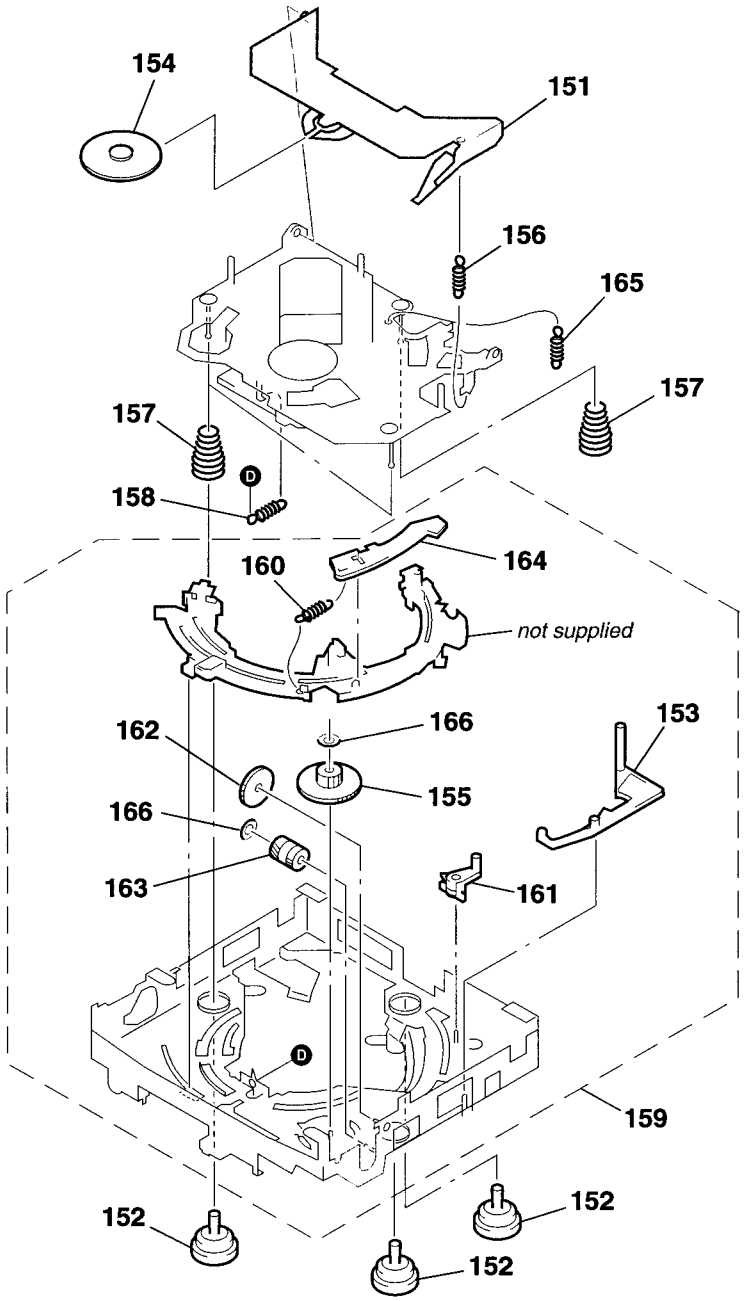
4-3. CD MECHANISM SECTION (1)
(MG-393XA-121//Q)



Ref. No.	Part No.	Description	Remark
101	A-3315-247-B	CHASSIS (T.U) ASSY	
102	3-931-909-01	SPRING (LR), TENSION	
103	1-683-664-11	DISC IN BOARD	
104	3-338-737-01	SCREW (2X3), +PS	
105	A-3315-040-A	ROLLER ASSY, ARM	
106	A-3283-270-A	SERVO BOARD, COMPLETE	
107	1-683-666-11	PICK-UP FLEXIBLE BOARD	
* 108	3-039-629-02	BRACKET (MOTOR)	

Ref. No.	Part No.	Description	Remark
109	3-225-784-01	SPRING (RA3), TENSION	
110	3-933-152-03	ROLLER (S)	
111	3-931-913-11	RING (ROLLER), RETAINING	
M903	A-3315-039-A	MOTOR SUB ASSY, LD (LOADING)	
#7	7-627-553-37	SCREW, PRECISION SCREW +P 2.3X3 TYPE3	
#8	7-627-553-17	SCREW, PRECISION SCREW +P 2X2 TYPE3	
#9	7-628-253-00	SCREW +PS 2X4	

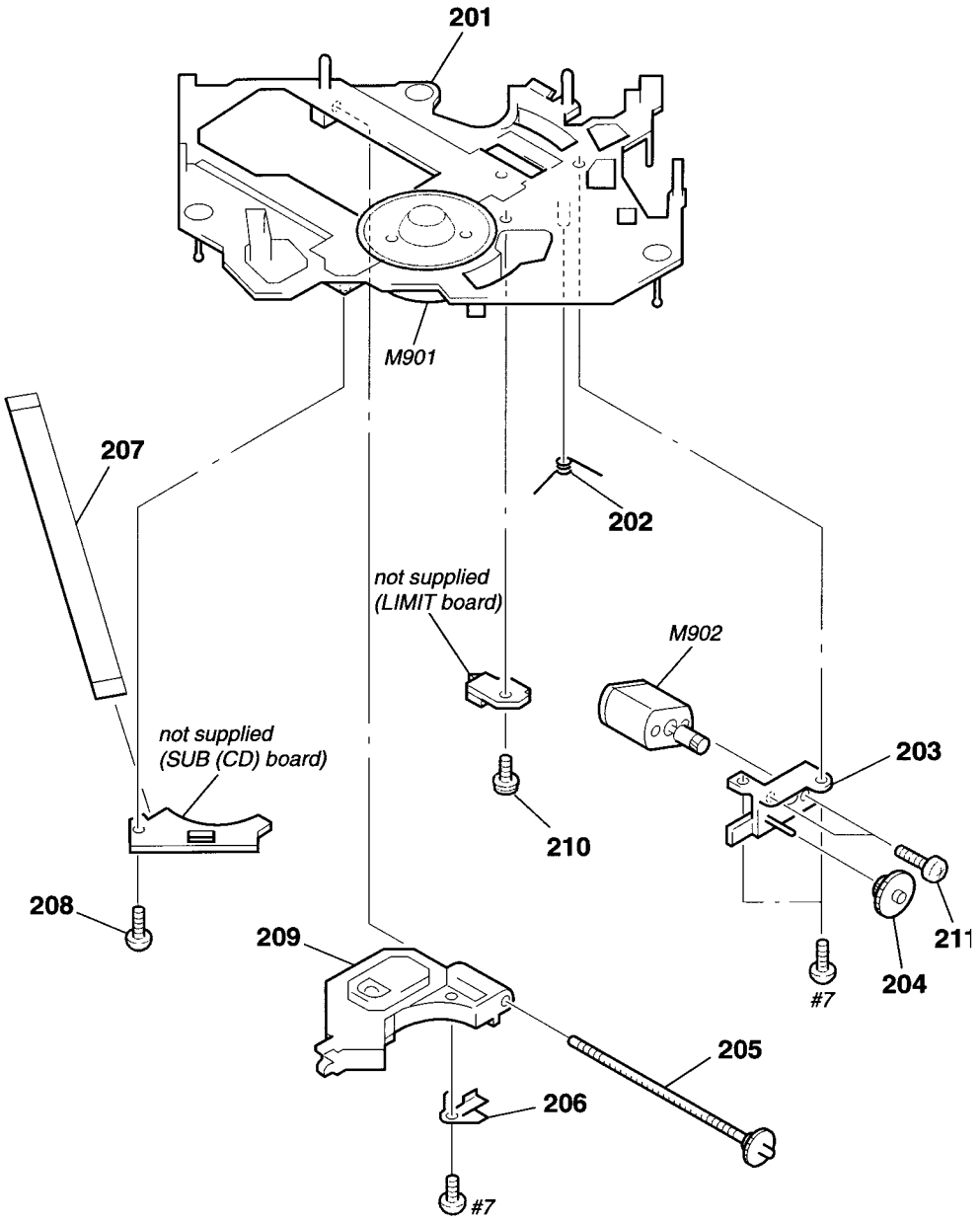
4-4. CD MECHANISM SECTION (2)
(MG-393XA-121//Q)



Ref. No.	Part No.	Description	Remark
151	X-3378-956-8	ARM ASSY, CHUCKING	
152	3-931-897-61	DAMPER (T)	
153	3-039-627-01	LEVER (D)	
154	3-040-165-02	RETAINER (DISC)	
155	3-014-727-01	WHEEL (LW), WORM	
156	3-931-895-01	SPRING (CH), TENSION	
157	3-931-898-01	SPRING (FL), COMPRESSION	
158	3-032-483-02	SPRING (KF1), TENSION	

Ref. No.	Part No.	Description	Remark
159	A-3315-243-D	CHASSIS (M) ASSY	
160	3-220-180-01	SPRING (TR2), TENSION	
161	3-931-881-03	LEVER (LOCK)	
162	3-931-882-02	GEAR (MDL)	
163	3-007-537-11	WHEEL (U), WORM	
164	3-007-536-05	LEVER (TR)	
165	3-032-484-01	SPRING (KR1), TENSION	
166	3-018-272-01	WASHER	

4-5. CD MECHANISM SECTION (3)
(MG-393XA-121//Q)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
201	X-3378-598-3	CHASSIS (OP) ASSY (including M901)	
202	3-043-494-01	SPRING (SL), TORSION	
203	3-040-170-01	BASE (DRIVING)	
204	3-040-419-01	GEAR (MIDWAY)	
205	A-3291-669-A	SHAFT (FEED) ASSY	
206	3-025-743-01	SPRING (FEED), LEAF	
207	1-683-665-11	MOTOR FLEXIBLE BOARD	
208	3-909-607-01	SCREW	
⚠209	8-820-103-11	OPTICAL PICK-UP KSS-720A/C-IP	
210	3-338-737-01	SCREW (2X3), +PS	
211	3-241-673-01	SCREW (SM), SPECIAL	
M902	A-3291-674-A	MOTOR ASSY, SLED (SLED)	
#7	7-627-553-37	SCREW, PRECISION SCREW +P 1.7X3 TYPE3	

DISC IN | KEY

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA.. : μA.. uPA.. : μPA..
  uPB.. : μPB.. uPC.. : μPC.. uPD.. : μPD..
- CAPACITORS
  uF : μF
- COILS
  uH : μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	1-683-664-11	DISC IN BOARD			
		**********			
**********					
		KEY BOARD			
		**********			
	1-694-977-11	CONDUCTIVE BOARD, CONNECTION			
		< CAPACITOR >			
C971	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C991	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C992	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C993	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C994	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C995	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
		< CONNECTOR >			
CN901	1-794-312-11	PIN, CONNECTOR 12P			
		< DIODE >			
D901	8-719-085-72	DIODE UMZ6.8ENTR			
D902	8-719-083-66	DIODE UDZS-TE-17-18B			
D991	8-719-069-54	DIODE UDZS-TE-17-5.1B			
		< IC >			
IC901	6-702-852-01	IC LC75824W-E			
IC971	6-600-163-01	IC RS-770			
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-805-078-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< DIODE >			
LED900	6-500-450-01	LED CL-195SR-CD-T (⏏)			
LED901	6-500-450-01	LED CL-195SR-CD-T (OFF)			
LED902	6-500-450-01	LED CL-195SR-CD-T (SOURCE)			
LED903	6-500-450-01	LED CL-195SR-CD-T (SEL)			
LED906	6-500-450-01	LED CL-195SR-CD-T (MODE)			
LED912	6-500-450-01	LED CL-195SR-CD-T (EQ3)			
LED931	6-500-459-01	LED NSCW505T-ARS (LCD BACK LIGHT)			
LED932	6-500-459-01	LED NSCW505T-ARS (LCD BACK LIGHT)			
LED951	8-719-082-38	LED CL-270SR-C-TS (DISC IND R)			
LED952	8-719-082-38	LED CL-270SR-C-TS (DISC IND L)			

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
LSW904	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (+ (VOLUME))			
LSW905	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (– (VOLUME))			
LSW907	1-771-883-11	SWITCH, TACTILE (WITH LED) (AF)			
LSW908	1-771-883-11	SWITCH, TACTILE (WITH LED) (ATT)			
LSW909	1-771-883-11	SWITCH, TACTILE (WITH LED) (SENS/BTM)			
LSW910	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (+ ▶▶I ▶▶ SEEK)			
LSW911	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (SEEK ◀◀ I◀◀ –)			
LSW913	1-771-883-11	SWITCH, TACTILE (WITH LED) (TA)			
LSW914	1-771-883-11	SWITCH, TACTILE (WITH LED) (DSPL)			
LSW915	1-771-883-11	SWITCH, TACTILE (WITH LED) (PTY)			
LSW916	1-771-883-11	SWITCH, TACTILE (WITH LED) (6)			
LSW917	1-771-883-11	SWITCH, TACTILE (WITH LED) (5)			
LSW918	1-771-883-11	SWITCH, TACTILE (WITH LED) (4/SHUF)			
LSW919	1-771-883-11	SWITCH, TACTILE (WITH LED) (3/REP)			
LSW920	1-771-883-11	SWITCH, TACTILE (WITH LED) (2)			
LSW921	1-771-883-11	SWITCH, TACTILE (WITH LED) (1)			
		< RESISTOR >			
R901	1-216-819-11	METAL CHIP	680	5%	1/10W
R902	1-216-819-11	METAL CHIP	680	5%	1/10W
R903	1-216-819-11	METAL CHIP	680	5%	1/10W
R904	1-216-821-11	METAL CHIP	1K	5%	1/10W
R905	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R906	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R907	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R908	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R909	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R911	1-216-819-11	METAL CHIP	680	5%	1/10W
R912	1-216-819-11	METAL CHIP	680	5%	1/10W
R913	1-216-819-11	METAL CHIP	680	5%	1/10W
R914	1-216-821-11	METAL CHIP	1K	5%	1/10W
R915	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R916	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R917	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R918	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R919	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R920	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R921	1-216-833-11	METAL CHIP	10K	5%	1/10W
R931	1-216-025-11	RES-CHIP	100	5%	1/10W
R932	1-216-021-00	METAL CHIP	68	5%	1/10W
R933	1-216-017-11	RES-CHIP	47	5%	1/10W

Ref. No.	Part No.	Description			Remark
R941	1-216-025-11	RES-CHIP	100	5%	1/10W
R942	1-216-025-11	RES-CHIP	100	5%	1/10W
R943	1-216-021-00	METAL CHIP	68	5%	1/10W
R944	1-216-017-11	RES-CHIP	47	5%	1/10W
R945	1-216-817-11	METAL CHIP	470	5%	1/10W
R946	1-216-017-11	RES-CHIP	47	5%	1/10W
R951	1-216-025-11	RES-CHIP	100	5%	1/10W
R952	1-216-021-00	METAL CHIP	68	5%	1/10W
R954	1-216-025-11	RES-CHIP	100	5%	1/10W
R955	1-216-021-00	METAL CHIP	68	5%	1/10W
R956	1-216-025-11	RES-CHIP	100	5%	1/10W
R957	1-216-021-00	METAL CHIP	68	5%	1/10W
R961	1-216-017-11	RES-CHIP	47	5%	1/10W
R962	1-216-817-11	METAL CHIP	470	5%	1/10W
R963	1-216-017-11	RES-CHIP	47	5%	1/10W
R964	1-216-025-11	RES-CHIP	100	5%	1/10W
R965	1-216-025-11	RES-CHIP	100	5%	1/10W
R966	1-216-021-00	METAL CHIP	68	5%	1/10W
R971	1-216-821-11	METAL CHIP	1K	5%	1/10W
R972	1-216-809-11	METAL CHIP	100	5%	1/10W
R981	1-216-817-11	METAL CHIP	470	5%	1/10W
R982	1-216-817-11	METAL CHIP	470	5%	1/10W
R983	1-216-817-11	METAL CHIP	470	5%	1/10W
R984	1-216-817-11	METAL CHIP	470	5%	1/10W
R985	1-216-817-11	METAL CHIP	470	5%	1/10W
R986	1-216-817-11	METAL CHIP	470	5%	1/10W
R987	1-216-811-11	METAL CHIP	150	5%	1/10W
R988	1-216-811-11	METAL CHIP	150	5%	1/10W
R989	1-216-811-11	METAL CHIP	150	5%	1/10W
R991	1-216-864-11	METAL CHIP	0	5%	1/10W
R992	1-216-851-11	METAL CHIP	330K	5%	1/10W
R993	1-216-857-11	METAL CHIP	1M	5%	1/10W
R994	1-216-821-11	METAL CHIP	1K	5%	1/10W
R995	1-216-821-11	METAL CHIP	1K	5%	1/10W
R996	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< SWITCH >			
S900	1-771-884-11	SWITCH, TACTILE (WITH LED) (⏏)			
S901	1-771-884-11	SWITCH, TACTILE (WITH LED) (OFF)			
S902	1-771-884-11	SWITCH, TACTILE (WITH LED) (SOURCE)			
S903	1-771-884-11	SWITCH, TACTILE (WITH LED) (SEL)			
S906	1-771-884-11	SWITCH, TACTILE (WITH LED) (MODE)			
S912	1-771-884-11	SWITCH, TACTILE (WITH LED) (EQ3)			
**********					
	A-3274-588-A	MAIN BOARD, COMPLETE			
		**********			
	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR >			
C1	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C2	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3	1-126-163-11	ELECT	4.7uF	20%	25V
C4	1-124-589-11	ELECT	47uF	20%	16V
C5	1-124-589-11	ELECT	47uF	20%	16V
C6	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C7	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C51	1-124-589-11	ELECT	47uF	20%	16V
C54	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C55	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C56	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C57	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C58	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C59	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C61	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C62	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C64	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C301	1-126-153-11	ELECT	22uF	20%	6.3V
C302	1-126-153-11	ELECT	22uF	20%	6.3V
C303	1-126-153-11	ELECT	22uF	20%	6.3V
C305	1-124-584-00	ELECT	100uF	20%	10V
C332	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C333	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C401	1-124-233-11	ELECT	10uF	20%	16V
C404	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C405	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C406	1-216-864-11	METAL CHIP	0	5%	1/10W
C407	1-216-864-11	METAL CHIP	0	5%	1/10W
C412	1-124-589-11	ELECT	47uF	20%	16V
C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C420	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C421	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C431	1-124-233-11	ELECT	10uF	20%	16V
C432	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C441	1-124-233-11	ELECT	10uF	20%	16V
C442	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C451	1-124-233-11	ELECT	10uF	20%	16V
C452	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C461	1-124-233-11	ELECT	10uF	20%	16V
C462	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C479	1-124-589-11	ELECT	47uF	20%	16V
C480	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C503	1-124-584-00	ELECT	100uF	20%	10V
C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C505	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C506	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C507	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C508	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C509	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C601	1-135-473-21	ELECT	3300uF	20%	16V
C602	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C617	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C618	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C621	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C622	1-125-710-11	DOUBLE LAYERS	0.1F		5.5V
C623	1-124-584-00	ELECT	100uF	20%	10V
C631	1-124-257-00	ELECT	2.2uF	20%	50V
C751	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C753	1-124-589-11	ELECT	47uF	20%	16V
C754	1-124-257-00	ELECT	2.2uF	20%	50V
C755	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C756	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C757	1-124-233-11	ELECT	10uF	20%	16V
C758	1-124-233-11	ELECT	10uF	20%	16V
C759	1-124-233-11	ELECT	10uF	20%	16V
C760	1-124-584-00	ELECT	100uF	20%	10V
C761	1-124-233-11	ELECT	10uF	20%	16V
C764	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C765	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
JW95	1-104-942-11	ELECT	1uF	20%	50V
JW97	1-104-942-11	ELECT	1uF	20%	50V
		< CONNECTOR >			
CN601	1-774-701-11	PIN, CONNECTOR 16P			
CN701	1-794-311-21	PLUG, CONNECTOR 12P			
CNP301	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
		< DIODE >			
D1	8-719-158-15	DIODE RD5.6S-B			
D479	8-719-404-50	DIODE MA111-TX			
D480	8-719-158-15	DIODE RD5.6S-B			
D501	8-719-404-50	DIODE MA111-TX			
D502	8-719-404-50	DIODE MA111-TX			
D580	8-719-056-84	DIODE UDZ-TE-17-7.5B			
D581	8-719-056-93	DIODE UDZ-TE-17-18B			
D601	8-719-049-38	DIODE 1N5404TU			
D609	8-719-056-83	DIODE UDZ-TE-17-6.8B			
D651	8-719-056-93	DIODE UDZ-TE-17-18B			
D710	8-719-109-97	DIODE RD6.8ES-B2			
D711	8-719-056-83	DIODE UDZ-TE-17-6.8B			
D712	8-719-056-83	DIODE UDZ-TE-17-6.8B			
D715	8-719-056-83	DIODE UDZ-TE-17-6.8B			
D716	8-719-109-97	DIODE RD6.8ES-B2			
D717	8-719-109-97	DIODE RD6.8ES-B2			
D718	8-719-109-97	DIODE RD6.8ES-B2			
D719	8-719-034-94	DIODE MA4180-M(QZ)			
D720	8-719-109-97	DIODE RD6.8ES-B2			
D751	8-719-970-02	DIODE 1SR139-400			
D752	8-719-053-18	DIODE 1SR154-400TE-25			
D753	8-719-970-02	DIODE 1SR139-400			
D754	8-719-970-02	DIODE 1SR139-400			
D755	8-719-053-18	DIODE 1SR154-400TE-25			
D756	8-719-053-18	DIODE 1SR154-400TE-25			
D757	8-719-970-02	DIODE 1SR139-400			
D758	8-719-970-02	DIODE 1SR139-400			
D759	8-719-970-02	DIODE 1SR139-400			
D760	8-719-970-02	DIODE 1SR139-400			
D761	8-719-053-18	DIODE 1SR154-400TE-25			
D762	8-719-053-18	DIODE 1SR154-400TE-25			
		< IC >			
IC51	6-703-809-01	IC SAA6588T/V2-518			
IC401	6-703-302-01	IC BD3803F-FE2			
IC501	6-802-513-01	IC MN101C49KSG			
IC602	8-759-682-69	IC XC61CN4302MR			
IC750	6-703-376-01	IC TDA8589J/N1			
		< JACK >			
J1	1-815-185-12	JACK (ANTENNA)			
J330	1-774-698-11	JACK, PIN 2P (AUDIO OUT REAR)			

Ref. No.	Part No.	Description			Remark
		< JUMPER RESISTOR >			
JC1	1-216-296-11	SHORT CHIP	0		
JC21	1-216-296-11	SHORT CHIP	0		
JC29	1-216-864-11	METAL CHIP	0	5%	1/10W
JC53	1-216-296-11	SHORT CHIP	0		
JC59	1-216-296-11	SHORT CHIP	0		
JC88	1-216-821-11	METAL CHIP	1K	5%	1/10W
JC304	1-216-864-11	METAL CHIP	0	5%	1/10W
JC401	1-216-864-11	METAL CHIP	0	5%	1/10W
JC406	1-216-296-11	SHORT CHIP	0		
JC407	1-216-296-11	SHORT CHIP	0		
JC431	1-216-296-11	SHORT CHIP	0		
JC441	1-216-296-11	SHORT CHIP	0		
JC444	1-216-296-11	SHORT CHIP	0		
JC479	1-216-864-11	METAL CHIP	0	5%	1/10W
JC530	1-216-296-11	SHORT CHIP	0		
JC532	1-216-296-11	SHORT CHIP	0		
JC533	1-216-864-11	METAL CHIP	0	5%	1/10W
JC580	1-216-296-11	SHORT CHIP	0		
JC581	1-216-296-11	SHORT CHIP	0		
JC582	1-216-296-11	SHORT CHIP	0		
JC609	1-216-296-11	SHORT CHIP	0		
JC631	1-216-296-11	SHORT CHIP	0		
JC651	1-216-296-11	SHORT CHIP	0		
JC753	1-216-296-11	SHORT CHIP	0		
JC754	1-216-296-11	SHORT CHIP	0		
JC755	1-216-296-11	SHORT CHIP	0		
JC756	1-216-864-11	METAL CHIP	0	5%	1/10W
		< COIL >			
L1	1-469-844-11	INDUCTOR	2.2uH		
L301	1-410-501-11	INDUCTOR	2.2uH		
L302	1-469-876-11	INDUCTOR, FERRITE BEAD			
L303	1-469-876-11	INDUCTOR, FERRITE BEAD			
L304	1-216-864-11	METAL CHIP	0	5%	1/10W
L305	1-216-864-11	METAL CHIP	0	5%	1/10W
L306	1-216-864-11	METAL CHIP	0	5%	1/10W
L307	1-216-864-11	METAL CHIP	0	5%	1/10W
L501	1-410-501-11	INDUCTOR	2.2uH		
L502	1-469-844-11	INDUCTOR	2.2uH		
L601	1-456-227-11	COIL, CHOKE	250uH		
		< TRANSISTOR >			
Q1	8-729-106-68	TRANSISTOR 2SD1615A-GP			
Q22	8-729-900-53	TRANSISTOR DTC114EK			
Q431	8-729-920-21	TRANSISTOR DTC314TK-T-146			
Q441	8-729-920-21	TRANSISTOR DTC314TK-T-146			
Q451	8-729-920-21	TRANSISTOR DTC314TK-T-146			
Q461	8-729-920-21	TRANSISTOR DTC314TK-T-146			
Q478	8-729-900-53	TRANSISTOR DTC114EK			
Q479	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q580	8-729-900-53	TRANSISTOR DTC114EK			
Q581	8-729-900-53	TRANSISTOR DTC114EK			
Q582	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q631	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q651	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q664	8-729-027-23	TRANSISTOR DTA114EKA-T146			

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R1	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2	1-216-809-11	METAL CHIP	100	5%	1/10W
R3	1-216-809-11	METAL CHIP	100	5%	1/10W
R29	1-216-809-11	METAL CHIP	100	5%	1/10W
R54	1-216-837-11	METAL CHIP	22K	5%	1/10W
R56	1-216-797-11	METAL CHIP	10	5%	1/10W
R57	1-216-817-11	METAL CHIP	470	5%	1/10W
R60	1-216-797-11	METAL CHIP	10	5%	1/10W
R61	1-216-864-11	METAL CHIP	0	5%	1/10W
R62	1-216-864-11	METAL CHIP	0	5%	1/10W
R405	1-218-882-11	METAL CHIP	30K	0.5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-809-11	METAL CHIP	100	5%	1/10W
R409	1-216-809-11	METAL CHIP	100	5%	1/10W
R431	1-216-809-11	METAL CHIP	100	5%	1/10W
R432	1-216-841-11	METAL CHIP	47K	5%	1/10W
R433	1-216-864-11	METAL CHIP	0	5%	1/10W
R441	1-216-809-11	METAL CHIP	100	5%	1/10W
R442	1-216-841-11	METAL CHIP	47K	5%	1/10W
R443	1-216-864-11	METAL CHIP	0	5%	1/10W
R451	1-216-809-11	METAL CHIP	100	5%	1/10W
R452	1-216-841-11	METAL CHIP	47K	5%	1/10W
R453	1-216-864-11	METAL CHIP	0	5%	1/10W
R461	1-216-809-11	METAL CHIP	100	5%	1/10W
R462	1-216-841-11	METAL CHIP	47K	5%	1/10W
R463	1-216-864-11	METAL CHIP	0	5%	1/10W
R479	1-216-805-11	METAL CHIP	47	5%	1/10W
R480	1-216-864-11	METAL CHIP	0	5%	1/10W
R501	1-216-837-11	METAL CHIP	22K	5%	1/10W
R502	1-216-809-11	METAL CHIP	100	5%	1/10W
R503	1-216-809-11	METAL CHIP	100	5%	1/10W
R504	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R505	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R508	1-216-813-11	METAL CHIP	220	5%	1/10W
R509	1-216-813-11	METAL CHIP	220	5%	1/10W
R510	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R511	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R512	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R513	1-216-845-11	METAL CHIP	100K	5%	1/10W
R514	1-216-845-11	METAL CHIP	100K	5%	1/10W
R515	1-216-809-11	METAL CHIP	100	5%	1/10W
R516	1-216-809-11	METAL CHIP	100	5%	1/10W
R517	1-216-841-11	METAL CHIP	47K	5%	1/10W
R518	1-216-821-11	METAL CHIP	1K	5%	1/10W
R520	1-249-441-11	CARBON	100K	5%	1/4W
R521	1-216-833-11	METAL CHIP	10K	5%	1/10W
R522	1-216-833-11	METAL CHIP	10K	5%	1/10W
R523	1-216-809-11	METAL CHIP	100	5%	1/10W
R524	1-216-809-11	METAL CHIP	100	5%	1/10W
R525	1-216-809-11	METAL CHIP	100	5%	1/10W
R526	1-216-809-11	METAL CHIP	100	5%	1/10W
R527	1-216-809-11	METAL CHIP	100	5%	1/10W
R528	1-216-845-11	METAL CHIP	100K	5%	1/10W
R530	1-216-845-11	METAL CHIP	100K	5%	1/10W
R531	1-216-845-11	METAL CHIP	100K	5%	1/10W
R532	1-216-845-11	METAL CHIP	100K	5%	1/10W
R533	1-216-845-11	METAL CHIP	100K	5%	1/10W
R534	1-216-833-11	METAL CHIP	10K	5%	1/10W
R535	1-216-845-11	METAL CHIP	100K	5%	1/10W
R536	1-216-845-11	METAL CHIP	100K	5%	1/10W
R539	1-249-417-11	CARBON	1K	5%	1/4W
R540	1-216-845-11	METAL CHIP	100K	5%	1/10W
R541	1-216-845-11	METAL CHIP	100K	5%	1/10W
R582	1-216-821-11	METAL CHIP	1K	5%	1/10W
R583	1-216-821-11	METAL CHIP	1K	5%	1/10W
R584	1-216-849-11	METAL CHIP	220K	5%	1/10W
R585	1-216-849-11	METAL CHIP	220K	5%	1/10W
R609	1-216-821-11	METAL CHIP	1K	5%	1/10W
R631	1-249-425-11	CARBON	4.7K	5%	1/4W
R632	1-216-841-11	METAL CHIP	47K	5%	1/10W
R633	1-216-841-11	METAL CHIP	47K	5%	1/10W
R634	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R636	1-216-845-11	METAL CHIP	100K	5%	1/10W
R651	1-216-821-11	METAL CHIP	1K	5%	1/10W
R652	1-249-437-11	CARBON	47K	5%	1/4W
R653	1-216-833-11	METAL CHIP	10K	5%	1/10W
R654	1-216-833-11	METAL CHIP	10K	5%	1/10W
R671	1-216-809-11	METAL CHIP	100	5%	1/10W
R672	1-216-809-11	METAL CHIP	100	5%	1/10W
R673	1-216-833-11	METAL CHIP	10K	5%	1/10W
R674	1-216-845-11	METAL CHIP	100K	5%	1/10W
R720	1-216-864-11	METAL CHIP	0	5%	1/10W
R752	1-216-809-11	METAL CHIP	100	5%	1/10W
R756	1-216-841-11	METAL CHIP	47K	5%	1/10W
R999	1-216-837-11	METAL CHIP	22K	5%	1/10W
		< SWITCH >			
S702	1-692-431-21	SWITCH, TACTILE (RESET)			
		< TUNER >			
TU1	A-3220-887-A	TUNER UNIT (TUX-030)			
		< VIBRATOR >			
X51	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)			
X501	1-781-294-21	VIBRATOR, CRYSTAL (18.432MHz)			
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
	A-3283-270-A	SERVO BOARD, COMPLETE			
		**********			
	1-683-666-11	PICK-UP FLEXIBLE BOARD			
		< CAPACITOR >			
C1	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C3	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C4	1-104-609-11	ELECT CHIP	100uF	20%	4V
C5	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C6	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C8	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C9	1-162-924-11	CERAMIC CHIP	56PF	5%	50V
C10	1-162-924-11	CERAMIC CHIP	56PF	5%	50V
C11	1-162-909-11	CERAMIC CHIP	4PF	0.5 PF	50V
C13	1-162-916-11	CERAMIC CHIP	12PF	5%	50V

SERVO

Ref. No.	Part No.	Description			Remark
C14	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C15	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C16	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C17	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C18	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C19	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C20	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C22	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C23	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C24	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C25	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C26	1-126-391-11	ELECT CHIP	47uF	20%	6.3V
C27	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C29	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C30	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C34	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C35	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C36	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C38	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C41	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C43	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C44	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C70	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C71	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN1	1-764-616-41	HOUSING, CONNECTOR (PC BOARD) 30P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< RESISTOR >			
FB5	1-216-298-11	RES-CHIP	2.2	5%	1/10W
		< IC >			
IC1	8-759-699-98	IC uPD63711GC-8EU			
IC2	8-759-658-87	IC BA5810FP-E2			
		< TRANSISTOR >			
Q1	8-729-904-87	TRANSISTOR 2SB1197K-R			
		< RESISTOR >			
R3	1-216-797-11	METAL CHIP	10	5%	1/10W
R5	1-218-344-11	METAL CHIP	7.5K	5%	1/10W
R6	1-216-837-11	METAL CHIP	22K	5%	1/10W
R7	1-216-839-11	METAL CHIP	33K	5%	1/10W
R8	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9	1-216-840-11	METAL CHIP	39K	5%	1/10W
R10	1-216-835-11	METAL CHIP	15K	5%	1/10W
R12	1-216-837-11	METAL CHIP	22K	5%	1/10W
R14	1-216-841-11	METAL CHIP	47K	5%	1/10W
R15	1-216-841-11	METAL CHIP	47K	5%	1/10W
R17	1-216-809-11	METAL CHIP	100	5%	1/10W
R18	1-216-809-11	METAL CHIP	100	5%	1/10W
R19	1-216-809-11	METAL CHIP	100	5%	1/10W
R20	1-216-809-11	METAL CHIP	100	5%	1/10W
R21	1-216-821-11	METAL CHIP	1K	5%	1/10W
R22	1-216-821-11	METAL CHIP	1K	5%	1/10W
R26	1-216-797-11	METAL CHIP	10	5%	1/10W
R29	1-216-833-11	METAL CHIP	10K	5%	1/10W
R30	1-216-833-11	METAL CHIP	10K	5%	1/10W
R31	1-216-789-11	METAL CHIP	2.2	5%	1/10W
		< SWITCH >			
SW5	1-762-944-12	SWITCH, DETECTION (SMALL TYPE) (DOWN)			
		< VIBRATOR >			
X1	1-795-520-11	VIBRATOR, CERAMIC (16.9344MHz)			

****

MISCELLANEOUS

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4	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)
201	X-3378-598-3	CHASSIS (OP) ASSY (including M901)
207	1-683-665-11	MOTOR FLEXIBLE BOARD
⚠209	8-820-103-11	OPTICAL PICK-UP KSS-720A/C-RP
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A
M902	A-3291-674-A	MOTOR ASSY, SLED (SLED)
M903	A-3315-039-A	MOTOR SUB ASSY, LD (LOADING)

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ACCESSORIES

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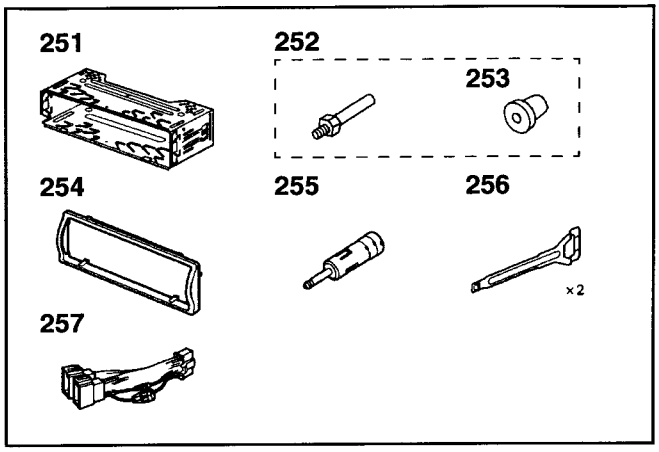
3-247-340-11	MANUAL, INSTRUCTION (ENGLISH,GERMAN, FRENCH,ITALIAN,DUTCH)
3-247-341-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, GERMAN,FRENCH,ITALIAN,DUTCH)
X-3383-264-1	CASE ASSY (for FRONT PANEL)

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
251	X-3382-647-1	FRAME ASSY, FITTING	
252	X-3382-926-1	SCREW ASSY (BS), FITTING	
253	3-349-410-11	BUSHING	
254	3-246-468-01	COLLAR	
255	1-465-459-21	ADAPTOR, ANTENNA	
256	3-246-471-01	KEY (FRAME)	
257	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	



Printed by: Schaltungsdienst Lange, Berlin (GERMANY)